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A
Way to get
VVEALTH,

Containing fixe Principall Vocations, for
Callings, in which every good Husband or hus-
-wife, may lawfully imploy themselves.

A S

1. *The natures, ordering cūing, breeding, choyce, use, and feeding of all
sorts of Cattel, and Fowl, fit for the service of man : As also the riding
and dyeing of Horses, either for War or Pleasure.*
2. *The knowledge, use, and laudable practice of all the Recreations meet for
a Gentleman.*
3. *The Office of a Houſ-wive, in Physick, Chyrurgery, extraction of Oyles,
Banquets, Cookery, ordering of Feasts, preserving of Wine, conceited Se-
crets, Distillations, Perfumes, ordering of Wooll, Hemp, Flax, Dying, use
of Dayries, Malting, Brewing, Baking, and the profit of Oats.*
4. *The enrichment of the Wea'd in Kent.*
5. *The Husbanding and enriching of all sorts of barren Grounds, making
them equal with the most fruitfull : with the preservation of Swine. And
a computation of men, and Cattles labours. &c.*
6. *The making of Orchards, Planting and Graſting, the Office of Garde-
ning and the Ornaments, with the best Husbanding of Bees.*

The first five books gathered by G. M: The last by
Master W. L. for the benefit of Great Brittain.

The Tenth time corrected, and augmented by the Author.

L O N D O N,
Printed by *William Wilson*, for *George Saw-
bridge*, at the Bible on Ludgate-hill,
neer Fleet-bridge. 1660.



TO THE

Right Honourable,

And most enobled with all inward, and
outward Vertues,

RICHARD SACKVILE,

Baron of Buckburj, and Earle of Dorset, &c.



*Although the monstrous shapes of
Books (Right Honourable, and
best enobled Lord) have with
their disguised and unprofitable
visard like faces, half scar'd even
Vertue her self from that Antient
Defence and Patronage, which in former Ages most
Nobly shee employed, to preserve them from Envy:
Yet so much I know, the largenesse of your Worthy
Brest is indued with Wisdom, Courage, and Count-
ty, that notwithstanding the vanities of our igno-
rant Writers, you wil be pleased out of your Noble Spirit,
favourably*

The Epistle Dedicatory.

favorably to behold whatsoever shall bring a publick good to our Countrey, at which end I have only aymed in this small Book In which, I have run far from the way or tract of other Writers in this nature: yet I doubt not but your Honour shall find my path more easie, more certain, and more safe then any, nay by much, far less difficult or dangerous to walk in; I must confesse, something in this nature I have formerly published, as namely of the Horse only, with whose nature and use I have been exercised and acquainted from my Childhood, and I hope, without boast, need not yeeld to any in this Kingdome. Yet in this Work, I hope your Lordship, and all other Princely maintainers of that worthy and serviceable Beast, shall find, I have found out, and herein explained a neerer and more easie course for his preservation and health, then hath hitherto been found or practised by any, but my self only: whatsoever it is, in all humbleness I offer it as a sacrifice of my Love and service to your Honour, and will ever whilst I have breath to be

Your Honours

in all dutifull service,

G. M.

Cheape, and Good

HUSBANDRY

FOR

**The well-Ordering of all Beast and Fowles,
and for the general Cure of their Diseases.**

Containing the Natures, Breeding, Choice, Use, feeding, and
Curing of the Diseases, of all manner of Cattel, as Horse,
Oxe, Cow, Sheep, Goats, Swine, and tame Conies.

Shewing further the whole Art of Riding great Horses, with
the breaking and ordering of them, and the dyeting of the
Running, Hunting, and Ambling Horse, and the manner
how to use them in their Travel.

Also, approved Rules for the Cramming, and fatting of all sorts
of Poultry, and Fowls, both tame and wild, &c. And divers
good and well approved Medecines, for the Cure of all the
Diseases in Hawks, of what kind soever.

Together with the use and profit of Bees, the manner of Fish-
ponds, and the taking of all sorts of Fish.

Gathered together for the generall good and profit of the
Common-wealth, by exact and assured experience from English practises,
both certain, easie, and chesp, differing from all former and forrain expe-
riments, which either agreed not with our Cline, or were too hard to
come by, or over-costly, and to little purpose: all which herein are avoid-
ed. Newly corrected and enlarged with many Excellent Additions.

The Tenth Edition.

LONDON,

Printed by *W. Wilson*, for *George Sawbridge*, at the Bible
on Ludgate-hill near Elect bridge. 1660.



TO THE COURTEOUS
R E A D E R.



Here is no Arteſt, or man of Induſtry
(Gourtcous and Gentle Reader)
which mixeth judgment with his
experience, but findeth in the tra-
vel of his labours better and ncerer
courſes to make perfect the beauty
of his work, then were at firſt pre-
ſented to the eye of his knowledge :

for the mind being pre-occupied, and buſied with a
vertuous ſearch, is ever ready to catch hold of what-
ſoever can adorn or illuſtrate the Excellency of the
thing, in which he is employed ; and hence it hapneth
that my ſelf having ſeriously beſtowed many years to
find out the truth of theſe knowledges, of which I have
intreated in this Book ; have now found out the inſal-
lible way of curing all diſeaſes in Cattle ; which is by
many degrees more certain, more eaſie, leſs difficult,
and without all manner of coſt and extraordinary char-
ges, then ever hath been publiſhed by any home born
or forrain practiſer. Wherein (friendly Reader) thou
ſhalt find that my whole drift is to help the needfull
in his moſt want and extremitie. For having many
times

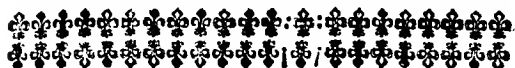
To the Courteous Reader.

times in my journeying, I seen poor and rich mens Cattell fall suddainly sick, some travelling by the way, some drawing in the Plough or Draught, and some upon other Employments; I have also beheld those Cattell or Horses dye, ere they could be brought either to a Smith, or other place where they might receive Cure: Nay, if with much pains they have been brought to the place of Cure, yet have I seen Smiths so unprovided of Apothecary Simples, that for want of a matter of six pence, a Beast hath dyed worth many Angells. To prevent this, I have found out those certain and approved Cures, wherein if every good Horse-lover, or Husbandman, will but acquaint his knowledge with a few hearbs, or common Weeds, he shall be sure in every Field, Pasture, Meadow, or Land-furrows; nay, almost by every high way side, or blind Ditch, to find that which shall preserve and keep his horse from all suddain extremities. If thou shalt find benefit, think mine houts not ill wasted; if thou shalt not have occasion to approve them, yet give them thy gentle passage to others, and think me, as I am,

Thy Friend,

G. M.

To



A short Table expounding all the hard words in this Book.

A.



Altri-pigmentum, or *Orpiment*, is a yellow hard substance to be bought at the *Pothecaries*.

Aristoiochia-longa, otherwise called *red Mader*, is an Herb growing almost in every field.

Aristo ochia-rotunda, is the Herb called *Galingale*.

Agri-mony, or *Egremony*, is an usual and known Herb.

Anceos, *Comin ro'al*, is an Herb of some called *Bulwort*, *Bishopsweed*, or *Herb-williams*.

Anise, is that Herb which bears *Anise-seeds*.

Azei, of some called *Dill*, is an Herb like *Fennel*, onely the seeds are broad like *Orange-seed*.

A mu-Castus, of some called *Tulesaine*, is an Herb with reddish leaves, and linewy, like *Plantain*.

Egyptiacum, is a reddish *Unguent*, to be bought at the *Pothecaries*, and is soveraign for *hystulaes*.

Assafetida, a stinking strong Gum, to be bought at the *Pothecaries*.

Adiaces, or *Adarces*, is that *Salt* which is ingendred on the *Marishes*, by the violence of the *Suns* heat after the tide is gone away.

Asterion, is an Herb growing amongst stones, as on walls, or such like; it appeareth by night, it hath yellow flowers like *Foxgloves*, and the leaves are round and blewish.

Aloes, is a bitter Gum, to be bought at the *Pothecaries*.

B.

B*ien*, or *Beers*, is an Herb with long broad leaves indented, and grows in hedge-rows.

Rolearmoniack, is a red hard earthly substance, to be bought at the *Pothecaries*, and is of a cold and binding nature.

B

Brooms-

A Table of hard words.

Broomwort, is an Herb with brown coloured leaves, and beareth a blew flower, and moit commonly grows in Woods.

C

Cresses, are of two kinds, *Water-Cresses*, and *Laud-Cresses*: they have broad smooth leaves, and the first grows in moist places, the latter in Gardens, or by high-ways.

Comin, see *Amos*.

Carthamus, is an Herb in taste like *Saffron*, and is called *bastard Saffron*, or *Mock-Saffron*.

C Lamint, is an ordinary Herb, and groweth by Ditches sides by high-ways, and sometimes in Gardens.

Coriander, is an Herb which beareth a round little seed.

Chives, are a small round Herb growing in Gardens, like little young *Onions*, or *Scallions*, not above a week old.

D

D'apente, a soveraign powder made of five equal simples, as *Bayberries*, *ivory*, *Aristolochia-retunda*, *Myrrhe*, and *Gemiana*, may be bought of the Pothecary.

Beetony, is an Herb called *Pepper-wort*, or *Horse-radish*, and grows in many open fields.

Dragon, is an Herb common in every Garden.

E

E Lecampane; is an Herb of some called *Hors-helm*, and grows almost in every field, and every Garden.

Eye-bright, is an Herb growing in every Meadow.

F

Fennugreek, is an Herb which hath a long slender crayling stalk, hollow within, and sown in Gardens, but easiest to be had at the Apothecaries.

Fernsmund, is an Herb of some called *Water-Fearn*, hath a triangular stalk, and is like *Polypody*, and it grows in Bogs and hollow grounds.

G

G Alingale, see *Aristolochia-retunda*.

H

H Orse-mint, is an Herb that grows by water sides, and is called *Water-mint*, or *Brook-mint*.

Hors-

A Table of hard words.

Horfe-beim, see *Elecampana*.

House-leek, is a weed which grows upon the tops of houses that are thatcht, and are like unto a small *startiboke*.

Hearb Robert, hath leaves like *Hearb Bennet*, and small flowers of a purple colour, and grows in most common fields and Gardens.

I

I^{ro} y, is the shaving of the *Elephants* tooth, or the old *Harts* or *Stags* horn, being the smooth white thereof.

K

K^{ot}-grasse, is a long round weed, with little round smooth leaves,, and the stalks very knotty and rough, winding and wreathing one seam into another very confusedly, and groweth for the most part in very moist places.

L

L^{et}rice, is a common fallow in every Garden.

L^{oll}ium, is that weed which we call *Cockell*, and groweth amongst the corn in every field.

Liverwort, is a common Hearb in every garden.

M

M^Ath, is a Weed that grows amongst corn, and is called of some *Hogs-fennell*.

Myrrhe, is a Gum to be bought at the Apothecaries.

Man-drake, is an Hearb which grows in Gardens, and beareth certain yellow Apples, from whence the Apothecaries draw a sovereign Oyle for broken bones.

N

N^Epe, see *Calamint*.

O

O^Riganum, is an Hearb called *Wild-Ma-joram*, and grows both in open fields, or in low Copses.

Orifice, is the mouth, hole, or open passage of any wound or ulcer.

Oppopanax, a Drug usuall to be bought at the Apothecaries.

P

P^litch of Burgundy, is *Rosen*; and the blacker the better.

Plantain, is a fat leaf and sinewy, growing close to the ground, and it is called Whay-bred leaf.

A Table of hard words.

Plantain, is an Herb that groweth both in fields and gardens, and is best when it flowreth.

Patch-grease, is that tallow which is gotten from the boyling of Shoo-makers threads.

Q

Quinque-folio, of some caled *Cinque-foyle*, is that Herb which is called *five-leaved grasse*.

R

Red-Oker, is a hard red stone, which we call *Raddle*, *Orell*, *Marking-stone*.

S

Selendine, or *Tetterwort*, is a Weed growing in the bottome of Hedges, which being broke, a yellow juice will drop and run out of it.

Sherwit, is an Herb with many small leaves, and grows most in Gardens.

Stubwort, is an Heab which grows in woddy places, and is called *Wood Sorrell*.

Sanguis Draconis, is a hard red Gum to be bought at the Apothecaries.

Sperma Ceti, is the seed of the *Whale*, excellent for inward bruises, and to be bought at the Apothecaries.

Stonecrop, is a green weed growing on the tops of walls.

Sal-armoniack, is a Drug to be bought at the Apothecaries.

T

Tussilaginis, is that Weed which we call *Colets-foot*.

Triapharmacum, a composition made of three simples, and to be bought at the Apothecaries.

Turn-merick, is a yellow Simple, of strong savour, to be bought at the Apothecaries.

V

Verdigrease, is a green fatty Gum drawn from Copper: and is to be bought at the Apothecaries.

W

Wood-rose, or *Wild Eglantine*, is that small thinne flower which grows upon Bryars in Woods or Hedges.

Y

Yarrow, is an Herb called the *Water Violet*, and grows in Lakes or Marsh grounds.

THE



THE GENERALL CURE AND ORDER-
ing of all Horses : As also the whole Art of Riding great
Horses ; with the breeding, breaking, and ordering
of them : Together with the manner how to use the
running, hurring, and ambling horse, before, in,
and after their Travell.

CHAP. I.

*Of the Horse in generall, his choice for every severall use, his
Ordering, Diet, and best preservation for health, both in
Travell, and in Rest.*



THE full scope and purpose of this work,
is in few, plain, and most undoubted true
words, to shew the Cure of all manner of
diseases belonging to all manner of ne-
cessary Cartell, nourished and preserved
for the use of man, making by way of de-
monstration, so easie and plain a passage,
to the understanding and accomplishment
of the same, that nor the simplest which

with priviledge to be esteemed no Idiot; nor the poorest, if he can
take two shillings, but shall both understand how to profit him-
selfe by the Book, and at the cheapest rare purchase all the receipts
and simples declareed in the whole Volume. For in sober truth
this Book is fit for every Gentleman, Husbandman, and good

mans pocket, being a memory which a man carrying about him will, when he is cald to account, give a man full satisfaction whether it be in the field, in the Town, or any other place where aman is most unprovided.

Nature of
Horses.

And now forasmuch as the Horse of all creatures is the noblest strongest, and aptest to do a man the best and worthiest services both in Peace and War, I think it not amisse first to begin with him. Therefore of his nature in generall: he is valiant, strong, and nimble, and above all other beasts most apt and able to indure the extreamest labours, the moyst quality of his composition being such, that neither extreame heat doth dry up his strength, nor the violence of cold, freze the warm temper of his moving spirits; but that where there is any temperate government, there he withstandeth all effects of sicknesse, with an uncontroled constancy. He is most gentle and loving to the Man, apt to be taught and not forgerfull when an impression is fixed in his brain. He is watchfull above all other beasts, and will indure his labour with the most empy stomack; he is naturally given to much cleanlinesse, is of an excellent scent, and offended with nothing so much as evil favors.

The
choice of
Horses, &
their
shapes.

Now for the choice of the best Horse, it is divers, according to the use for which you will employ him. If therefore you would have a Horse for the Wars, you shall chuse him that is of a good tall stature, with a comely lean head, an outswelling forehead, a large sparkling eye, the white whereof is covered with the eyebrows, and not at all discerned, or if at all, yet the least is best; a small thin ear short and pricking; if it be long, well carried and ever moving, it is tolerable; but if dull or hanging, most hatefull: a deep neck, large crest, broad breast, bending ribs, broad and streight chine, round and full buttock, with his huckle-bones hid, a raylor high and broad, set on neither too thick, nor too thin; for too much hair shews sloath, and too little too much collar and heat: a full swelling thigh, a broad, flat, and lean leg, short pattern'd, strong joynted, and hollow bones, of which the long is best, if they be not wic'd, and the broad round the worst.

Colours
of Horses.

The best colours are Brown-bay, Daple-gray, Roand, Bright-bay, Black, with a white neer foot behind, white far foot before, white rache, or white star, Chestnut or Sorrel, with any of those
marks

marks, or Dun with a black list : And of these horses, for the Wars the Courser of *Napies* is accounted the best, then the *Almain*, the *Scandinian*, or the *French*.

If you would chuse a Horse for a Princes Seat, any supream Magistrate, or for any great Lady of State, or woman of eminence you shall chuse him that is of the finest shape, the best rein, who naturally bears his head in the best place, without the help of the mans band ; that is of nimblest and easiest pace, gentle to get upon bold without making affrights, and most familiar and quiet in the company of other Horses : his colour would ever be milk-white, with red fains, or without, or else fair duple gray with white Mane, and white tayl : And of these, the *English* is best, then the *Hun-ar an*, the *Swedish*, the *Poland*, the *Irish*.

If you will chuse a Horse onely for travel, ever the better shape the better hope, especially look that his head be lean, eyes swelling outward, his neck well risen, his chine well risen, his joynts very strong ; but above all his patterns short and straight, without bending his going, and exceeding hollow and tough hoofs : let him be of temperate nature, neither too furious, nor too dull, willing to go without forcing, and not desirous to run when there is no occasion.

If you would chuse a Horse for hunting, let his shape in general be strong, and well knit together, making equal proportions ; for as unequal shapes shew weaknesse, so equal members assure strength and indurance. Your unequal shapes are a great head to a little neck, a big body to a thin buttock, a large limb to a little foot, or any of these contraries, or where any member suits not with the whole proportion of the body, or with any limb next adjoyning. Above all let your hunting Horse have a large lean head, wide nostrils, open chauld, a big weasand, and the wind-pipe straight, loose, well covered, and not bent in the pride of his Reining : The *English* Horse bastardized with any of the former Races first spoke of, is of all the best.

If you chuse a Horse for running, let him have all the finest shape that may be but above all things, let him be nimble, quick and fiery, apt to fly with the least motion : long shapes are sufferable, for though they shew weaknesse, yet they assure sudden speed. And the best Horse for his use, is the *Arabian*, *Berber*, or his

his battard, Jennets are good, but the Turks are better.

Coach-
Horse.

If you will chuse a Horse for the Coach, which is called the swift draught, let his shape be tall, broad, and well furnisht, not grosse with much flesh, but with the bignesse of his bones, especially look if he have a strong neck, a broad breast, a large chine, sound clean limbs, and tough hooves: and for this purpose, your large English Geldings are best, your Flemish Mares next, and your strong flon'd Horses tolerable, *Flemish* or *Frisons*.

Pack-
Horses.

If you will chuse a Horse for portage, that is, for the Pack or Hampers, chuse him that is exceeding strong of Body and Limbs, but not tall, with a broad back, out ribs, full shoulders and thicke withers; for if he be thin in that part, you shall hardly keep his back from galling: be sure that he take a strong stride with his feet, for their pace being neither trot nor amble, but onely a foot pace, he which takes the largest strides goes at the most ease, and rides his ground fastest.

Cart-
Horses.

Lastly, if you will chuse a Horse for the Cart or Plough, which is the slow draught, chuse him that is of most ordinary height, for Horses in the Cart unequally sorted, never draw at ease, but the tall hang up the low Horse. Let them be of good strong portion, big breasted, large bodied, and strong limbd by nature rather inclin'd to crave the whip, then to draw more then is needfull. And for this purpose Mares are most profitable; for besides, the effecting of your work, they yearly bring you forth increase: therefore, if you furnish your draught with Mares to breed, observe in any wise, to have them fair fore-handed, that is, good head, neck, breast, and shoulders; for the rest it is not so regardfull, onely let her body be large; for the bigger room a Foal hath in the dams belly, the fairer are his members. And above all things observe never to put your draught beasts to the Saddle, for that alters their pace, and hurts them in their labour.

Of
Mares.

Now for the ordering of these several Horses: first for the Horse for service, during the time of his teaching, which is out of the Wars, you shall keep him high and lustily; his food, no Straw but good Hay, his provender clean dry Oates, or two parts Oates, and one part Beans, or Pease, well dried and hard, the quantity of half a peck at a watering, morning, noon, and evening, is sufficient.

In

In his dayes of rest, you shall dresse him betwixt five and six in the morning, water betwixt seven and eight, and feed from nine till after a eleven: in the afternoon, you shall dresse betwixt three and four, water betwixt four and five, and give provender till six, then litter at eight, and give food for all night. The night before he is ridden, you shall at nine of the clock at night take away his hay from him; at four of the clock in the morning give him a handfull or two of Oats, which being eaten, turn him upon his snaffle, rub all his body and legges over with dry cloaths, then saddle him, and make him fit for his exercise. Soon as he is cal'd for to be ridden, wash his bit in fair water, and put it into his mouth with all other things necessary, draw up his girths, and see that no buckles hurt him: then lead him forth, and as soon as he hath been ridden, all sweating as he is, lead him into the stable; and first rub him quickly over with dry wisps, then take off his saddle, and having rubb'd him all over with dry cloaths, put on his housing cloth, then set on the saddle again, and girt it: then lead him forth, and walk him up and down in gentle manner an hour or more, till he be cold, then set him up, and after two or three hours fasting, turn him to his meat: then in the after noon, curb, rub, and dresse him, then water him, and order him as is afore said.

For ordering of the Horse for a Prince, or great Ladyes seat, *Ordering of let it be in his time of rest, like unto the horse for service: and in his time of labour like the travelling horse, as shal be shewed instantly:* *Princes seat.* only because he is to be more choise'y kept, I mean: in the beautifullest manner, his coat lying smooth, and shining, and his whole body without any stain or s'favourednesse; you shall ever when he hath been ridden, and commeth in much sweating, presently have him into the stable, and first rub him down with clean wisps, then taking off his saddle, with a Sword-blade whose edge is rebeted; you shall stroak his neck and body clean over, leaving no sweat nor filth that can be gotten out; then cloath him up, and set on the saddle, and walk him forth as afore said. After, order and diet him as you do other travelling Horses: dry Oats is his best provender, if he be fat and full; and Oats and Beans, if he be poor, or subject to lose his flesh quickly.

For your travelling horse, you shall feed him with the finest

Ordering of travelling horses.

hay in the Winter : and the sweetest grass in Summer : His Provender will be dry Oats, Beans, Pease or bread, according to his stomack : in the time of rest, half a peck at a watering is sufficient ; In the time of his labour, as much as he will eat with a good stomack. When you travel, water him two hours before you Ride ; then rub, dresse, and lastly feed ; then bridle up, and let him stand an hour before you take his back. Travell moderately in the morning till his wind be rack'd, and his limbs warmed, then after do as your affairs require. Be sure at night to water your Horse two miles before you come to your journeys end, then the warmer you bring him to his Inn, the better : walk not, nor waste not at all, the one doth beget colds, the other foundring in the feet or body : but set him up warm, well stopt, and soundly rubb'd with clean litter. Give no meat whilst the outward parts of your Horse are hot or wet with sweat, as the ear roots, the flanks, the neck, or under his chaps : but being dry, rub and feed him according to the goodnesse of his stomack. Change of food begetteth a stomack, so doth the washing of the tongue or nostrils with vinegar, wine and salt, or warm urine. Stop not your Horses forefeet with Cowdung, till he be sufficiently cold, and that the blood and humours which were dispersed, be settled into their proper places. Look well to his back that the saddle hurt not, to the girths that they gall not, and to his shoes, that they be large, fast, and easie.

Ordering of
hunting horses.

For the ordering of your hunting Horse, let him in the time of his rest, have all the quietnesse that may be, much litter, much meat, and much dressing, water ever by him, and leave him to sleep as long as he pleaseth. Keep him to dung, rather soft then hard, and look that it be well colour'd, and bright, for darknesse shews grease, and rednesse inward heating. After exercises, let mashes of sweet malt, be his usuall scourings ; and let bread of clean beans, or beans and wheat equally mixt, be his best food, and beans and oats the most ordinary.

Ordering of
running horses.

For the ordering of your running Horse, let him have no more meat then to suffice nature, drink once in four and twenty hours, and dressing every day once, at Noon onely. Let him have much moderate exercise, as Morning and Evening aydings, or the fetching of his water, and know no violence but in his courses onely.

Let

Let him stand dark and warm, have many cloaths, and much litter, being wheat strow only. If he be very fat, scour off; if of reasonable state, scour seldome; if lean, then scour but with a sweet mash only. Be sure your horse be empty before he can se; & let his food be the finest, lightest, and quickest of digestion that may be: the sweats are more wholesome that are given abroad, and the cooling most naturall which is given before he come in to the stable. Keep his limbs with cool oynments, and by no means, let any hot spices come into his body: if he grow dry inwardly, wash't meat is very wholesome. If he grow loose, then give him straw in more abundance. Burning of sweet persimie in the stable is wholesome; and any thing you either do about your horse, or give unto your horse, the more neat, cleanly, and sweet it is, the better it nourisheth.

For ordering the Coach-horse, let him have good dressing twice a day, Hay and Provender his belly full, and Litter enough to tumble on, and he cannot chuse but prosper. Let him be walk't and wash't after travell, for by reason of their many occasions to stand still, they must be inur'd to all hardnes, though it be much unwholesome. Their best food is sweet Hay, and well dried Beans and Oats, or Bran bread: Look well to the strength of their shooes, and the galling of their Harnesse. Keep their leggs clean, especially about the hinders feet-locks, and when they are in the house, let them stand warm clothed.

Ordering of
Coach horses.

For the ordering of the Pack-horse, or the Cart-horse, they need no washing, walking, or hours of fasting: only dresse them well, look to their shooes and back, and then fill their bellies, & they will do their labour. The best food is sweet Hay, Chaff, or Pease or Oat huls and Pease, or chopt straw; and Pease mixt together, once a week to give them warm Grains and Salt, is not a misse, for their labour will prevent the breeding of worms; or such like mischiefs.

Ordering of
the Pack and
Cart horse.

Now for the generall preservation of horses health, it is good whilst a horse is in youth and strength to let him blood twice in the year, that is, beginning of the Spring, & beginning of the Fall, when you may best afford him a weeks rest. After you have let him blood two dayes after, give him a comfortable drench, as 2 spoonfulls of *Diapente*, or such like, which is called *Horse-Mithridate*.

For the pre-
servation of al
horses.

date, in a quart of strong Ale. Use oft to perfume his head with Fränkincense, and in the heat of Summer, use oft to swim him. Let a fat Horse drink oft, and a little at once, and a lean Horse whensoever he hath appetite. Much rubbing is comfortable, and cheareth every member. Be sure to let your Horse eat grasse once in a year, for that cooleth the blood, scours away grosse humours, and gives great strength and nourishment to the body. If notwithstanding all these principles, your Horse fall into sickness and disease, then look into the Chapters following, and you shall find the truest, best approved, and the most familiar medicines for all manner of infirmities, that ever were known or published except my *Master-Piece*.

CHAP. II.

*Of Riding in generall, and of the particular knowledges
belonging to the Art of Riding of a great
Horse, or Horse for service,
or Pleasure.*

HAVING spoken something already of horses, it now followes, we say something of the commendable exercise of riding great Horses, which in the very action it self speaketh Gentleman to all that are performers or doers of the same. And though our English Gentry from a sloath in their industry, aim for the most part at no more skill then the riding, of a ridden and perfect Horse, which is but only the setting forth of another mans vertue, and thereby making themselves richer in discourse then action: yet our English Husbandman, or good-man whom I seek to make exact, and perfect in all things, shall not onely recreate himself by riding the horses whom the other men have made perfect, but shall by his own practise bring his Horse from utter ignorance, to the best skill that can be desired in his motions: wherein he shall find a two-fold pleasure, the one an excellent contentment to his mind, that he can perform so worthy an action, without the chargeable assistance of others, and the other a healthfull support to his body, when by such recreation, his

(spirits

The pleasure
of riding.

Spirits and inward faculties are revived and inflamed.

But now me-thinks, I hear some say, that I have utterly taken away the tune of this string, I have stricken so oft upon it, and that indeed there can be no delight where there is no variation: and that surely I cannot vary any more upon this plain Song, but the World would find discord either in this, or my former descants. But let them not deceive themselves, for my building standeth on a firm Rock, and I know both shall be worthily justifiable: only this I must inform all men, that in times past, long since, when our first rules of Horsemanship were given unto us, our Masters were not so skilfull in the abilities of Horse-performances as we are, but measur'd them by the proportions of their own weaker natures, and thence became so, too much tender over them, that they respected neither the greatnesse of their own labours, nor the length of time before they arrived to their desires, so in the end they might aspire to their wishes with safety and full satisfaction: whence it came to passe, that in those times, and even now in these, chiefly amongst those which are meerly Riders, and no Keepers, there is no lesse time allowed to the making up of a perfect Horse, then two years, when we know, and my self from experience can justify the same; that if the Rider can keep as well as Ride, that is, give as well directions for the preservation of a Horses health, and the avoidance of forances and sicknesse, as put in practice artfully, every violence to be used in his Lessons, he may very well make up a perfect Horse in three Months, fit either for pleasure or battell, which is the full scope and end of this Treatise: wherein I would not have any man expect either new Rules; or contradiction of any already set down by men of practice, and knowledge in the Art, but only a straightning or drawing of them together into a much narrower compasse, giving satisfaction to our desires, and finishing up our work with speed, which before was almost lost or neglected, with the length of our labours, as you shall fully perceive by this discourse which followeth.

First, then to speak of the taming of a young Colt, which is as ^{The taming of} it were the preface or introduction to the art of riding: You a young Colt. shall after he hath been in the house a week or a fortnight, and is familiar with the man; and will with all patiently indure currying,

rying, combing, rubbing, clawing and handling in every part and member of his body, without any shew of rebellion or knavishnesse, which you shall compasse by all gentle and easie means, doing nothing about him suddenly or rashly, but with leisure and moderation: then you shall offer him a saddle, which you shall set in the manger before him, that he may smell to it, & look upon it; and you shall gingle the girths and stirrops about his ears, to make him carelesse of the noyse, then withall gentle-
 nasse after you have rubb'd his sides therewithall, you shall set it on his back, and gird it gently on, and then place his Crooper with all ease, which done, you shall take a sweet watring trench, wash't, and annointed with honey and salt, and put it into his mouth, placing it to hang directly about his tush, and as it were a little leaning thereupon: this you shall do in the morning as soon as you have dress'd him, and then thus saddled and bridled, you shall lead him forth, and water him in your hand abroad: then bringing him in, and after he hath stood a little reined up on his trench an hour or more, take away the bridle and saddle, and let him go to his meat till the Evening: then lead him forth as before with the saddle to the water, then when he is set up gently, take off his saddle and cherish him, and then dresse him, and cloath him up for all night.

His saddling
and bridling.

The first back-
ing.

The next day saddle him and bridle him as before said, and put on him a strong mussole of writhen Iron, or a sharp Cavezan and Martingal, which you shall buckle at such length, that he may no more but feel it when he jerke up his head, and then lead him forth into some new plowed-field, or soft ground: and there after you have made him trot a good space about in your hand, and thereby taken away from him all his wantonnes and knavish distractions, you shall offer your foot to the stirrop; at which if he shew any distaste; either in body or countenance; you shall then course him about again: then offer again; and with leisure rise half way up, and go down again: at which if he shrink, correct him as before, but if he take it patiently, then cherish him, and so mount into the saddle, which done, after cherishing light down again, and give him bread or grasse to eate: then look that your girths be well girted and streight: that the Crooper be strong and of just length, that the bridle hang even,

and

and in his due place, without inward or outward offence, that your stirrups be set, and generally all things, without offence either to your self or to the beast, and then as before, mount his back, seat your self just and even in the saddle, make the reins of your bridle of equall length, carry your rod without offence to his eye in your right hand, the poynt either directly upright, or thwarted towards your left shoulder: Then having cherishd him, let the Groom which before led him, having his hand on the chaff halter, lead him forward a dozen or twenty paces, then gently straining your hand, with the help of the foot-man make him stand still then cherish him, and lead him forward again, and do this five or six times one after another, till by continuall use, you make him of your owne accord, (without the foot-mans help) by giving your body, and thrusting your legs forward, go forward; which as soon as he doth, you shall stay him, and cherish him, and then sitting on his back, let your foot-man lead him home, and bring him to the block, where after you have cherishd him, you shall gently alight, and cause him to be set up, and well dressed, and meated: The next day you shall bring him forth as before, and in all poynts, take his back, as aforesaid, and so by the help of the foot-man, trot fore-right half a mile at least; then let the foot-man lay off his hand, and walk by him, till you have of your self trotted him forth another half mile; then cherish him, and make the foot-man give him some grasse or bread to care, and then taking a large compassse, trot him home; and bring him to the block as before, and there alight, and so set him up.

The third day let your foot-man light upon some spare Jade, and then bringing your Colt to the block, take his back gently, and after you have cherishd him, the other riding before you, follow him forth right a mile; ever and anon at the end of twenty or thirty score, stopping the Colt gently, cherishing him, and making him yield, and go back a step or two, and then putting him forward again, till he be so perfect, that with the least motion he will go forward, stop and retire, which will be effected in two dayes more; in which space, if he chance at any time, to strike or rebell, you shall make him which rides before you, take the spare reyn, and lead him forward; whilst you give him two or three good lashes under the belly; and then being in his way, take the
spare

spare reyn to your telfe again: and thus you shall do, till all faulte be amended: then you shall spare your horseman, or guide, and only by your self for three or four dayes more, trot him every morning and afternoon, at least a mile or two forward, using him only to stop or retire, and bringing him home a contrary way: to that you went forth, till he be so perfect and willing, that he will take his way, how or in what manner your self pleaseth, ever observing to mount and dismount at the block only; except some speciall occasion constrain you to the contrary.

This you may very well bring to passe, the first week of the Horses riding.

The three
main points
of a horse-
mans skill.

As soon as you see your Horse will receive you to his back, trot forth-right; stop, and retire, and do all this with great patience and obedience; you shall then call into your mind the three main points of a Horsemans knowledge, which are helps, corrections, and cherishings. And for helps, they consist in these: First, the voyce, which foundeth sharply and cheerfully, crying, *viz*, *haw*, *hey*, and such like, adds a spirit and liveliness to the Horse, & lends a great help to all his motions: then the bridle, which restrained, or at liberty, helps him how to do, and shews which way to do.

Then the Rod which being only shewed, is a help to direct; being only moved, helps the quicknesse and nimblenesse of the motion; and being gently toucht withall, helps the loftinesse of a Horses salts and leaps, and makes him as it were gather all his strength into one point; and lastly, the calves of the legges, stirrop Leathers, and stirrops, which moved by the horses side, helps him to nimblenesse, swiftnesse and readinesse in turning. Some to these helps, adde the help of the Spur, chiefly in high salts or boundings, but it must be done in a just and true time, and with such gentle bitternesse; that the horse may understand it for a help, or else he will take distaste, and finding it favour like correction, instead of bettering his doings, do with more disorder, as to sprauke with his fore-feet in advancing, to yeak out with one or both his hinder feet in the corveit or bounding, shaking of his head and such like, as will appear in practise.

Of Correc-
tions and which
they be.

Now of Corrections, the most principle is the spur, which must

must not at any time be given triflingly, or itchingly, but soundly and sharply, as oft as just occasion shall require : then the Rod which upon disorder, sloth, or miscarriage of the members, must be given also soundly : then the voyce which being delivered sharply and roughly, as *ha villian, carrido, diablo*, and such like threatnings, terrifieth the horse, and maketh him afraid to disobey : and lastly the bridle which now and then stricken with a hard check in his mouth, reformeth many vices and distemperatures of his head : yet this last must be done seldome, & with great discretion, for to make a custome thereof, is the ready way to spoyl a Horses mouth.

Now of Cherishings, there are generally in use but three, as Of cherishing.
first the voyce, which being delivered smoothly and lovingly, as crying, *ball a so by, the e boy the*, and such like, gives the horse both a cheerfulnesse of spirit, and a knowledge that hee hath done well ; then the hand, by clapping him gently on the neck or buttock, or giving him grasse, or other food to eat, after he hath pleased you : and lastly the big end of the Rod, by rubbing him therewith upon the withers or maine, which is very pleasing and delightfull to the horse.

Now after these ordinary and usuall helps, corrections, and cherishings, you shall have respect to the Mulrole or Cavezan and Martingale, which carry in them all the three former both severall and unite, for it is first an especiall help and guide to every well disposed horse, for setting of his head in a true place, forming of his Reine, and making him appear comely and gallant in the eyes of the beholders ; then it is a sharp correction when a Horse yerketh out his nose, or disordereth his head any way or striveth to plunge or run away with his Rider : And lastly it is a great cherishing unto the Beast, when he yeeldeth his head to your hand, by shrinking from his face, and so leaving any more to torment him, but when he offendeth : whence it comes that more from this than any thing else, the Horse first gaineth the knowledge of his Masters will, and is desirous to performe it : therefore you shall be very carefull to the placing of this upon the Horse ; as first, that it hang somewhat low, and rest upon the tender Grissel of the Horses nose, whereby the corrections may be the sharper when occasion require it ; then that it be loose
D and

Of the Mulrole and Martingale.

and not straight whereby the Horſe may feel, upon the yielding in of his head how the offence goeth from him, and ſo know that only his own diſorder is his own puniſhment. Laſtly, he ſhall be carefull to note how he winneith the Horſe's head, and by thoſe degrees to draw his Marringle ſtraiter and ſtraiter, ſo as the Horſe may ever have a gentle feeling of the ſame, and no more ; till his Head and Reins be brought to that perfection that you deſire, and then there to ſtay, and keep the Marringle conſtantly in that place only, which you ſhall performe in thoſe few dayes which you rot your Horſe forth right, being before you bring him to any Leſſon, more then the knowledge of your ſelf, and how to receive you to his back, and trot forth obediently with y. u.

Of treading
he laſting.

When your Horſe is brought unto ſome certainty of Reins, will trot forth-right with you at your pleaſure, & by your former exerciſe therein is brought to breath and delight in his travell, which will grow and increaſe upon him, as you grow and increaſe in your labour, then you ſhall bring him to the treading forth of the large Rings in this manner : Firſt, if he be of heavy and ſluggiſh nature, ſlackiſh and dull, and, albeit he have ſtrength and ſufficiency of body, yet you find him ſlovenly & unapt, then you ſhall trot him in ſome new plowed field, ſoft and deep : But if he be of quick and of fieri ſpirit, apt, nimble, & ready to learn, then you ſhall trot him in ſome ſandy or gravelly place, where is ſtrong and firm ſoft hard, and there you ſhall make out a ſpacious large Ring, at leaſt threeſcore or fourſcore paces in compaſſe, and having walked him fix or ſeven times about the ſame on your right hand, you ſhall then by a little ſtraining of your right Reins, and laying the calfe of your left legge to his ſide making a half circle within your Ring upon your right hand, down to the center or mid-point thereof, and then by ſtraining your left Reins a little, and laying the calf of your right legge to his ſide, making another half circle to your left hand from the center to the outmoſt verge, which two half circles contrary turned, will make a perfect Roman S. within the Ring ; then keeping your firſt large circumference, walk your horſe about on your left hand, as oft as you did on your right, and then change within your Ring as you did before to your righthand again, and then trot him firſt

Choice of
ground.

on

on the right hand, then on the left, so long as you shall think convenient, and although our ancient Masters in this Art have prescribed unto us certain numbers of Ring turnes, and how oft it is meet to go about on either hand, as if all Horses were of one even ability; yet I would wish you to neglect those Rules, and only to practise your Horse in this Lesson, according to his strength of his body, sometimes applying him therein an hour, sometimes two, and sometimes three, more or lesse according to your discretion: for the space of time can neither bring weariness nor tiring: and for your change of hands, you shall do it as oft as shall seem best to your selfe, being ever very carefull to give him the most exercise and that hand, on which he is ever most unwilling to go; and in this Lesson be carefull also that he do it cheerfully, lustily, nimbly, quickning and inflaming his spirits by all the means possible, and when you find that he will trot his large rings perfectly, which will questionlesse be in lesse then a weeks space, being well applied therein, for you must not fore slow any morning except the Sabbath, hardly any afternoon also, if you find him sloathfull and heavy, for there is no greater hinderance then the Riders too much tenderesse, nor no greater furtherance then a continuall moderate exercise. Therefore as I said when he will trot his Rings well, then in the same manner, and with the same changes, you shall make him gallop the same Rings, which he shall do also with great dexterity, lightnesse and much nimblenesse, without losing the least part or grace of his best reine: Nay, so carefull you shall be thereof, that in this gallopping, you shall, as it were gather his body together, and make his Reine rather better then it was, and make him pick up his feet so truly and lofly, that not any eye may see or perceive a fault in his strokes; but that his inward feet play before his outward, and each of a side follow the other so directly, that his gallop may appeare as the best grace of all his motions: neither shall you enter him into this Lesson rashly and hastily but soberly, and with discretion, making him first gallop a quarter of the Ring then half, then three parts, and lastly the whole Ring: neither shall you force him into his Ring with violence or the sharpnesse of your hands, but with spirit and mettrall, making him by the lightnesse and cheerefulness of your own body,

Of gallopping
large Rings.

passé of his own accord into his gallop, and especially in his changes, where you may let him feel your Legge, and shew him your Rod on the contrary side : and herein isto benoted, that continually those changes (in as much as they are made in a much straighter compas) must be done ever with great quickness, and more stirring nimbleness then intire lessons.

Helps in the
large Ring-
turns.

Now for the helps necessary in these large Ring-turnes, they consist generally in the *Voice*, *Rod*, *Calves* of your Legs, and the *Bridle* ; In the *Voice* by quickning him up, and reviving his spirits when he grows sloathfull, with these words, *How, hey, or via* : In the *Rod*, by shewing it him on the contrary side, or laying it on the contrary shoulder, and sometimes by shaking it over his head, which is a kind of threatning, chiefly when you make your changes. In the calves of your legs, when you clap them hard to the contrary side to which he turneth, or by springing and jerking your leggs forward, hard upon your stirrop-leathers, which will quicken him and make him gather up his limbs better than the spur by many degrees : And lastly, in the bridle, by drawing it in a little straiter, and holding it with some more constancy, when you put any of your former helps in use, or doe any thing with more life or courage, for that maketh him draw his limbs together, and so straiten his Rings with gracely comelines.

Corrections in
the Ring
turns.

For the Corrections in these large Rings, they be divers ; as namely, the *Bridle*, the *Spur*, and the *Rod*, and sometimes the *voyce*, yet that but seldome ; for the bridle, you shall correct your Horse therewith if he carry his head or chaps awry, making as it were mouths and ill-favoured countenances, giving him now and then a little check in the mouth, and awaking him from such forgetfull passions, or now and then drawing the trench to and fro in his mouth, which will reform the errour ; then the spur which must be laid sharp and hard to his sides, when you find your helps will do no good, but that his sloath rather more and more increaseth, or when he preffeth and hangeth hard upon your hand or looseth the tutch of his rein, or such like vices ; for the Rod, when you find that he neglecteth the shewing or shaking of it, or when he disordereth any of his hinder parts and will not gather them up comely together, then you shall therewith give him a sound lash or two under the belly, or over the contrary shoulder, and to any of these former Corrections you

you ſhall ever accompany the threatening of your voyce, when the fault is too much foule, and ſo otherwiſe, becauſe there ſhould be ever an entire love betwixt the Horſe and the Horſeman, which continually chiding will either take away or atleaſt root out the apprehenſion thereof.

Now for your Cherifhings, they are thoſe which I formerly *Cherifhings* ſpoke of ; only they muſt be uſed at no time but when your Horſe in his *Ring* doth well, and hath pleaſed your mind, both with his cunning *turns* and tractableneſſe : and although the time for the ſame be when he hath finiſh'd his leſſons, yet there is a ſecret pleaſing and cheriſhing of a Horſe with the bridle, which muſt be exerciſed in the doing of his leſſons, and that is the ſweetning of his mouth by a little ceaſing of your bridle hand, and gently drawing it up back again, letting it come and go with ſuch an unperceiving motion, that none but the beaſt may know it.

When your Horſe can trot and gallop your large *Rings* with all perfeſtneſſe, which with good induſtry will be perfected in *Of ſtopping* leſs than a fortnights exerciſe, you ſhall then proceed to make *and going* him ſtop fair, comely, and without danger, which you ſhall do in this manner : Firſt, as ſoon as you have taken his back, cheriſh him, put him gently forward, and bring him into a ſwiſt trot : after you have trotted him forty or threeſcore yards forward, you ſhall by drawing in your bridle hand ſtraitly and ſuddenly, make him gather his hinder leggs and fore-legges together, and ſo in an inſtant ſtand ſtill, which as ſoon as he doth immediately you ſhall eaſe your hand a little, yet not ſo much as may give him liberty to preſs forward, but rather to yeeld backward which if you find he doth, you ſhall give him more liberty, and cheriſh him, and then having paused a while, draw in your bridle-hand, and make him go back two or three paces ; at which if he ſtrike, inſtantly eaſe your hand, and draw it up again, letting him come and goe till hee yeeld and go backward, which (for the moſt part) all horſes at the firſt will do : but if it be that your horſe rebell and will not go back with this gentle admonition, you ſhall then cauſe a footman ſtanding by to put him back with his hand, and in this motion you ſhall cheriſh him, that he may underſtand what your will is . and thus every time you make him ſtop, you ſhall make him retire back, till in one ſpace of time you have made both leſſons perfect : and this praſtiſe you ſhall uſe both till you

come to your large Rings, and at every time that you finish your Lesson, or give the Horse breath or ease ; whereby you shall perceive that your Horse shall learn to trot and gallop the large Rings, to stop and retire back all in one space of time, because you see successively they follow one another, and are to be done (though three) but as one intire lesson.

Helps.

Now for the helps in these Lessons, the best for stopping is the choice of ground, as by making your Horse ever to stop down the slope of some hill, or descending ground, whereby he may be compell'd to couch his hinder loynes the better, and to make him stop most comely, and to observe that the ground be firme and hard, without danger of sliding, lest the Horse finding such an imperfection, grow fearfull, and so refuse to do your will out of his own danger. In retiring you shall helpe him with your rod, by putting it before his breast, or shaking it before his knees, to make him remove his feet more quick and nimbly.

Corrections

For corrections in stopping, it must sometimes be done by your self, as with the even stroke of your spurs, when in his stop he disordered his head, or with any one single spur, when he casteth out his hinder loynes, and will not stop right in an even line : and sometimes it must be done by another by-stander, where he refuseth to stop at all. who standing at the place of stop, as soon as you draw up your hand, shall with his rod threaten the Horse and make him not dare to press forward, or if he doe presse forward, to make him retire swiftly back so much ground as he gain'd, both your self and the by-stander, rating him with your voices extreamly : for corrections in retiring, they are the even strokes of both your spurs, when hee sticks or presses upon your hand, and will not yeeld back : and also your rod struck sharply on his knees and breast : and the rod of a by-stander struck upon his breast, knees, and face, when his stubbornness is too violent.

Cherishings.

But for his cherishings, they be all formerly spoke of, when your will is comely and obediently performed. besides the addition of caresses, as a pressing of your bridle hand, and the suffering and cherishing of the by-stander, and so offering him to stand and recover breath a good space after.

When

When your horse can stop and retire well, which may be done Of advancing before.
 in the same space that you teach him in his large Ring turnes, for
 it is as if were three lessons learn'd in one ; you shall then teach
 him to advance before when he stoopeth, which is very comely
 and gracefull to the beholders ; and you shall do it in this man-
 ner : After you have stopp'd your Horse, without giving your
 hand any ease, you shall lay the calves of both your legges hard to
 his side, and adde thereto the noise of the shaking of your Rod,
 and your voyce, by crying *up, up*, which will at first (perad-
 venture) but a little mize him, because he understandeth not
 your meaning : Therefore you shall put him forward againe, and
 do as before, and that with a little more strength, continuing
 the practise of the same till you perceive hee taketh one foote
 from the earth, then cherish him a little, and so to the lessons a-
 gain, till hee taketh up both his legges from the ground, which
 when he doth, orderly or disorderly, yet cherish him exceedingly,
 that he may come to the knowledge of your meaning, without
 which all your labour is lost ; then to your former practise a-
 gain, till you have brought him to that perfectnesse, that he
 will with all readinesse : advance as oft as you will give him the
 calves of your legs to his sides, be it lesse or more times together :
 this done, you shall look to the orderly and comelinesse of his
 advancing : As first, that he takes up his legs both even together,
 and bend them inward toward his body ; then that he advance
 not too high (for fear of coming over upon you) but couch his
 hinder loynes close to the ground ; then that he spraleth not,
 nor paweth with his feet forward ; and lastly that hee advance
 not for his own pleasure, but when you command him by your
 own direct and orderly motions, for the contrary is a foul fault
 in Housmanship.

For helps in this Lesson, they are the calves of your legges the Helps.
 shaking of your Rod over his head, and your voyce, as is before
 said, and the daunt of some hanging ground, which will make
 his hinder loynes couch the better.

The Corrections are according to the nature of offences, as Corrections.
 the even strok of your spurs, or a good lash with your Rod, when
 you see hee vexeth his feet to the ground, and stubbornly applies
 himselfe to disobey you, or will take up his feet one after ano-
 ther,

ther, and not both together. If he do advance too high, so as he is ready to come over upon you, or if hee sprauke or paw forth with his feet, you shall not then only give him both your spurs hard together, but also a good jerke or two with your Rod between his ears: but if he advance when you would not have him, you shall then in the same instant jerke him over both the knees with your Rod; and if he advance again, jerk him again, not ceasing till he fix his feet to the ground, or go backward, and then cherish him.

Cherishings.

For particular cherishings in this Lesson, they are no other than those former spoke of, onely they must be done with a more ready watchfulnesse, in the very instant and moment of time, in which he performeth any thing well, that the Horse may understand why, and wherefore he receiveth such contentment, and thereby be encouraged to continue in his goodnesse, and be more ready to apprehend his Riders pleasure.

*The use of
advancing.*

For the use of advancing, it is two fold: as nameiy, to give a grace to his other Lessons, and to bring his body to nimblenesse: yet for the most part it is only us'd at the stop; where when you have finish'd any Lesson, if then concluding with the stop, you make him advance, once, twice, or thrice, it will be both a grace to the beast, and shew much art in the Horseman; also it maketh a Horse apt and ready to turn well, and making him trust to his hinder legges, whereby his fore parts may be directed and governed at the Horsemans pleasure.

*Of yerking
behind.*

Next to advancing, you shall teach your Horse to yerke behind, in this manner: When at any time you have made him stop, you shall presently with your Rod give him a good jerk under the belly neare to his flanke, which though at the first hee apprehended not, yet by a continuall and constant use thereof you shall in the end bring him to yerk out his hinder legges; at the first doing whereof, you shall cherish him, for that is the onely language by which he knoweth he doth your will, and then having paused a little, make him to do it again, increasing it every day, and doubling his doings till he be so ready, that when you please to give the jerke, he will then give the yerke, and then you shall look to the comelinesse of his doings, that is to say, that he yerk not out his hinder legges, till his fore-legges be above the ground

ground, then that he yerke not one leg farther out then the other, but both even together; then that he yerke not too high, and lastly, that he yerke not one leg out whilst the other is on the ground, all which are errors of great grosseffe. Therefore to make the horse more perfect in this lesson, it shall be good to teach him to yerke out behind, when he standeth in the stable, by jerking him on the buttocks with your rod, and not ceasing to molest him till he raise up his rump above the ground, and then to cherish him, and so to apply him without any ease and rest, till he do your will; then when he is perfect to put the same in practise when you are in the field on his back, by turning your rod in your hand to his buttock-ward, and touching him therewith, to make him yerke as aforesaid.

For the helps, they are the constant staying his mouth on the *Helps*.
bridle, the stroke of your rod under his belly, or the gentle touching him upon the rump of the same.

The corrections are onely the even stroak of your Spurs, when *Corrections*.
either he refuseth to yerke, or yerkeith out disorderly, or out of malice; or the single Spur on that side on which he yerkeith out most disorderly: and lastly, a restlesse holding of him to the lesson, not giving him any rest or ease, till he do it in that manner which you can wish.

Then for his cherishings, they are all those formerly mentioned, being bestowed upon him in the very instant of his well doing. *Cherishings*.

When your horse is perfect, in all the lessons formerly spoke *Of turning*.
of, and understandeth the helps and corrections belonging to the same, you shall then teach him to turn readily on both hands, by straitning his large rings, and bringing them into a much lesse compasse, and although amongst Horse-men, and in the Art of Horsemanship, there are divers and sundry turns, some high and lofty as the turn upon the *Corvet*, *Capriole*, or on hounds. some close and near the ground, as the turn *Tarra*, *Tarra*, or these we call *Caragolo*, *Sepegiare*, and such like, and some swift and flying, as the *Lucavelare*, *Chambetta*, and such like; yet sith they all labour but to one end, which is to bring an horse to an exact swiftnesse and readinesse in turning, I will in as brief and plain manner as I can shew you how to compasse the same. First, therefore, you shall make out a ring some three or four yards in com-

pasſe, and in the ſame, with all gentleneſſe a while, walk your horſe, ſuffering him to go the ſame at his own pleaſure, gathering his head up by little and little, and making him take pleaſure in the ſame, till you find that he taketh knowledge of the Ring, and will with all willingneſſe make about the ſame, coveting rather to ſtraiten it, than enlarge it; which perceived, you ſhall then carry your bridle hand conſtant and ſomewhat ſtrait, yet the outmoſt reyn ever ſomewhat more ſtrait than the inmoſt, making the horſe rather look from the Ring than into the Ring, and the calve of your leg, (as occaſion ſhall ſerve) ſomewhat neer to the outward ſide of the horſe, and then you ſhall trot him about the ring, firſt on the one ſide, and then on the other, making your changes within that ſtrait ring, as you did before within the large ring.

And in this ſort without ceaſing, you ſhall exerciſe your Horſe a full hour together, then ſtop him, make him advance twice or thrice together, then retire in an even Line, and ſo ſtand ſtill a pretty while, and cheriſh him; then when he hath taken freſh breath, to him again, and do as before, continually labouring by railing up his bridle-hand, and thruſling forward your Legs and body, to bring his trot to all the ſwiftneſſe, and loſtineſſe that may be, and your in changes to do them ſo readily, and roundly as may be: alſo, making him to lap his outmoſt leg ſo much over his inmoſt leg, that he may cover it more than a foot over, and thus you ſhall exerciſe him a whole forenoon at leaſt a weak together, only doing his former leſſons but once over in a morning and no more, and in this praſtiſe you teach him perfectly three leſſons together, that is the turn *Terra, Terra*, the *Incavalare*, and the *Chambetta*: the turn *Terra, Terra*, in the outmoſt circle of the ſtrait Ring, and the *Incavalare* and *Chambetta* in the changes, wherein he is forc't to lap one leg over another, or elſe to liſt up the inmoſt legge from the ground, while he brings the outmoſt over it: & ſurely in this Ring & theſe changes, conſiſteth all the main Art of turning, and the chiefeſt glory both of the horſe and the horſe-man: and therefore it is meet for every Rider to think this leſſon never perfectly learnt, and therefore continually to praſtiſe his horſe in the ſame, making him not onely tread and trot theſe narrow rings, but alſo gallop them, and from gallopping

gallopping them to passe them about in ground-salts, as by taking up his fore-legs from the ground both together, and bringing his hinder feet into their place, and so passing the Ring about once or twice or thrice. at your pleasure, or as oft as the horse's strength and courage will allow: and this is the true turn, called *Terra, Terra*, and of greatest request with Horse-men, and likewise with Souldiers; and this will every horse naturally and easily be brought unto: only by a continuall trotting and gallopping of these narrow Rings. Thus you see the perfectnesse of your large Rings brings your Horse to an easie use of the strait Rings; and the easie knowledge of the strait Rings brings a Horse to the perfection of turning, which is the ground and maine summe of this Art, a stepping begets retiring, and retiring advancing. These very Lessons as it were a chain, is link one to another.

The helps belonging to turning, are all whatsoever are for Helps. merly spoken of because it is a Lesson, which besides that it containeth in it selfe all other Lessons, so it must be done with more courage, Art, and nimblenesse, then any else whatsoever; and therefore the Horse had need of all the assistance that can possibly be given him.

The corrections are the spurs given on the utmost side, when the Horse sticks, and is harder to come about on the one side, then on the other, and the Rod stricken hard on the outmost side of the offending member, as also a continuall labour, when the Horse shewes either unwillingnesse or disobedience touching the unnimblenesse of his turning, when he beats one leg against another, or treads one foot upon another, the raps and hurts he doth himselfe, are sufficient corrections; and will both make him know his fault and amend it. Corrections.

For his cherishings, they are also the former already spoken of, yet to be used (if possibly) with greater earnestnesse, in as much as this Lesson being most cunning; would for the performance thereof ever receive the most comfort. Cherishings.

Your Horse being brought to this perfection, that hee will perfectly tread his large-rings, stop, retire, advance before, yerk behind, and turn readily on either hand, you shall then take away his musrole and trench, and in stead thereof put upon his head a gentle Covezan or two joynts and three peeces, with a

chap-band underneath, which you shall buckle close, but not freight, and be sure that the cavezan lye upon the tender griffel of the horses nose, somewhat near to the upper part of his nostrils; then to the chap-band you shall fasten the Martingale, and lastly to the rings on each side the cavezin, you shall fasten long divided reins, more then a yard and a half in length a piece, then into his mouth you shall put a sweet smooth cannon bit, with a plain watering chain, the cheek being of large size, so as it may arm a little above the point of his shoulder; and the kirble shall be thick, round, and large, hanging loofely upon his nether lip, and inticing the horse with his lip to play with the same. Thus armed you shall take his back, and casting the left reine of your cavezan over the horses right shoulder, you shall bear it with your thumb, with the reins of the bit in your left hand; and the right reins of the cavezan you shall cast over the horses left shoulder, and bear it with your rod in your right hand, and so trot him forth the first morning out right a mile or two in the highway, making him onely feel and grow acquainted with the bit, and onely making him now and then stop and retire, and gathering up his head in a due place, and fashioning his rein with all the beauty and comelineffe that may be, which done, the next day you shall bring him to his large rings, and as was before shewed, there make him perfect with the bit as you did with the snaffle: first in trotting, then in gallopping of the same, then make him stop, retire, advance, yerk behind, and come upon their hand with a great deal more perfectnesse, and more grace then was formerly done with the trench, which is an easie labour, in as much as the bit is of much better command, and brings more comelineffe to the horses motions, is also a greater help, a sharper correction, and a cherisher of more comfort then any before used. And thus in the first moneth you may make any horse perfect upon the trene in the lessons before spoke of, so in the second moneth you may make the same lessons a great deal more perfect upon the bit, and so presume in two moneths to have a perfect ground horse, fit either for Souldier or Schollar, that hath any good rules of horfman-ship in him.

Of the turning Post.

Now for as much as the Art in turning in horses is of great difficulty, and ought of all Lessons to be most elaborate, I will speak

ſpeak a little further thereof, and ſhew you the practice of theſe preſent times, for the beſt accompliſhment of the ſame, without ſtirring up evil motions in the horſe, whence Reſtiſſenneſſe, and other wild errors do grow; for it is certain that every horſe naturally deſireth neither offence, nor to offend; but the raſh diſcretion of ignorant horſemen, which will compell a horſe to do, before he know what, or how to do, is the begetting of thoſe evils which are hardly or ever reclaimed: for a horſe is like an ill brought up boy, who having learnt drunkenneſſe in his youth, will hardly be ſober in his age, and having once got a knaviſh quality, though he be never ſo much puniſhed for the ſame, will yet now and then ſhew that the remembrance is not utterly extinguiſhed; and for as much as in this Leſſon of ſtrait turns, there is ſo much curious hardneſſe that a horſe is moſt ſubject to rebell, and learn many evils thereby, therefore to prevent all thoſe evils, you ſhall cauſe a ſmooth ſtrong poſt to be well ram'd, and fixed in the earth in the miſt of the ſtrait ring, at the very point and center thereof, then cauſing a foot-man to ſtand at the poſt, you ſhall give him the right rein of your cavezan, which you ſhall make him hold about the poſt, and ſo walk or trot your horſe about the ſame on your right hand as long as you pleaſe, then taking up the right rein, give him up the left rein, and do as much upon the left hand, and thus change from hand to hand; as oft as you ſhall think convenient, till you have brought your horſe to the abſolute perfection of every turn, the poſt being ſuch a guide and bond unto the horſe, that albeit the horſeman were of himſelf utterly ignorant, yet it is impoſſible the horſe ſhould either diſorder or diſobey the Riders purpoſe.

When your horſe can thus perfectly ſet every ſeverall turn Of managing. either ſtrait, or open with his bit. you ſhall then teach him to manage, which is the onely poſture for the uſe of the ſword on horſeback, and you ſhall do it in this manner: Firſt, cauſe ſome by-ſtander to prick up in the earth two riding rods, about twenty or forty yards or more, as you think good, diſtant one from the other; then walk your horſe in a ſtraight turn or ring about the firſt on your right hand, and ſo paſſing him in an even furrow down to the other Rod, walk about it alſo in a narrow

row Ring on your left hand, then thrust him into a gentle gallop down the even furrow, till you come to the first Rod, and there making him (as it were) stop, and advance without any pause or intermission of time, thrust him forward again, beat the turn *Terra, Terra*, about it on your right hand, then gallop forth right to the other Rod, and in the same manner beat the turn about on your left hand; and thus do as oft as you shall think it convenient for your own practice and the horses strength.

Diversities of
Manages.

Now of these manages, our ancient Masters in Horse-manship have made divers kinds, as manage with rest, and manage without rest, manage with single turns, and manage with double turns, which indeed doth rather breed confusion, than understanding in either the Horse or Horseman: Therefore for your better knowledge, I will reduce them only but to two kinds, that is manage open, and manage close: your open manage is that which I shewed you before, when you turn *Terra, Terra*, which is the most open of all strait turns: and your close manage is when you turn upon the *Incavalant*, or *Ciambitta*, which are the closest of all turns, and may be done as before I shewed in a flying manner, even upon one foot, which although it be artfull, yet it is not so glorious and safe for the Souldiers practice, only, this you may be most assured of, that when a Horse can manage upon both these turns, he may manage without more instruction, upon any other turn whatsoever.

Of the career.

When your Horse is perfect in the manages before said, you may then passe a *career*, at your pleasure, which is to run your Horse forth-right at his full speed, and then making him stop quickly, suddenly, firme, and close on his buttock: in which lesson there needeth litle instructions, but onely some few observations, as first, that you make not your *career* too long, whereby the Horse may be weakened; or too short, whereby his true wind and courage may be undiscove'd, but competent and indifferent, as about four or fivescore yards at the most: then that you start him gently without a fright: and lastly, that you first give him a little warning with your bridle-hand, and then stop him firmly and strongly: which place of stop, if it be a little bending downwards, it is a great deal the better. And thus in these lessons already shewed you, consisteth all the full perfection

fection of a horse for service in the Warres, which any painfull man may bring his horse well unto, in less then three months: how ever our Ancients in former times have been blind, and in the same practice, have wasted two years, ere they brought it to perfection.

Now forasmuch as to the Art of riding, belongeth divers other salts and leaps, right pleasant and curious to behold; and though not generally used in the wars, yet not utterly uselesse for the same; and sith, they are many times very needfull for the health of mans body, I will by no means abridge our English Husband-man of the same, but proceed to the lessons, which are meet for horses of pleasure, of which the first is to make a horse bound aloft with all his four feet from the ground, and you shall do it in this manner? When you have trotted your horse forthright a dozen or twenty yards, you shall stop him, and when he hath advanced once or twice, you shall a little straiten your bridle-hand, and then give him the even stroke of both your spurs together hard, which at first will but only quicken and amaze him, but doing it again and again, it will breed other thoughts in him, and he being of spirit and mettall; (as it is lost labour to offer to teach a Jade such motions) he will presently gather up his body, and either rise little or much from the ground, then presently cherish him, and after some rest, offer him the like again, and thus do till you have made him bound twice or thrice, then make much of him, and do no more for that day; the next day renew his Lesson again, and double his exercise, increasing so day by day, till he come to that perfection, that he will bound whensoever your Spurs shall command him.

When your horse can bound perfectly, then you shall teach him the Corvet in this manner: You shall at the corner where two walls joyn together, a little hollow the ground a horses length or more, and then place a smooth strong post by the side of the hollownesse of a horses length likewise from the wall; then over against the post, fasten an Iron Ring in the wall; this done, ride your horse into the hollow place, and fasten one of the reins of the Cavezan unto the Ring, and the other about the post, then after you have cherish'd your horse, make him advance

advance, by the help of your calves of your legs onely twice or thrice together; then let him stand still, and cherish him, then make him to advance again at least a dozen times together, then rest, and after advance twenty or forty times together, dayly increasing his advancements as he grows perfect therein, till you perceive that he hath got such a habit therein that he will by no means presse forward, but keeping his ground certain, advance both before and behinde of an equal height, and keep one just and certain time with the motion of your legs, neither doing slower nor faster, but all after one manner and leasure: but if you finde that he doth not raise his hinder parts high enough, then you shall cause a footman to stand by you, and as you make him advance before, so the footman by jerking him gently upon his hinder fillets with his rod to raise up his hinder parts also; this will bring your horse in few dayes to a perfect and brave Corvet, so that after you may do it in any place where you please without the help either of wall or post, or other bystander.

Of the gallop
Galliard.

When your horse is made perfect in the Corvet, and that he will do it readily and comely, you shall at the end of every third or fourth advancing, give him the stroak of your Spurs, and make him bound aloft; then put him to his Corvet again as before, and then make him bound again; and thus at the end of every third advancing, see you make him bound for the length of a tilt bar, or an ordinary managing furrow, according to the horses strength, and this is called the *gallop galliard*, which if it be taught a horse along by the side of some wall or smooth pale, it is so much the better, and a great deal fewer disorders will rise and trouble the Rider.

Of the Capriole.

The next lesson you shall teach your horse after the gallop galliard, is the *Capriole*. or Goats leap, which is the same manner of motion which the Corvet is, onely it is to be done forward, and much ground gained in the salt, and the horse is to raise his hinder parts as high, or rather higher then his fore-parts, and to keep rather a swifter then slower time in doing of it; therefore when you teach your horse to do it, you shall bring him into some hollow furrow, where the ground is a little descending, and turning his head to the descent, put him into the Corvet temperate and gently, then when you give him the calves of your legs

leggs to raiſe up his fore-parts, in the ſame inſtant jerk your legge violently forward again, that he may not ſtick, but carry his hinder-leggs after his fore-leggs, and let ſome ſkilfull foot-man ſtanding by your ſide, jerk the horſe over the fillets with his rod, and make him raiſe up his hinder parts; and thus do without ceaſing, till he perform your will nimble and cunningly, and then forget not to cheriſh him, and give him all comfort poſſible. And this leſſon and the other which conſiſt of violent and quick ſalts or leaps, would ever be practiſed the firſt in the morning whiſt a Horſe is freſh and luſty, for to put him to them after his fire-edge is taken away, will but bring him to a loathing of his inſtruction, or at beſt to do them but ſlovenly, heavily, and unwillingly.

There is alſo another motion which is pleaſing to the eye, *Of going though it be very labourſome to the body, which is to make a ſide.* Horſe go ſide-long of which hand ſoever the Rider is diſpoſed, and is very neceſſary in the warres, becauſe it is the avoiding of any blow coming from the Enemy. This motion when you intend to teach your Horſe, you ſhall draw up your bridle hand ſomewhat ſtrait, and if you determine to have him goe aſide to your right hand, lay your left Rein cloſe to his neck, and the calve of your left legge cloſe to his ſide, and as you did in the *Incavalace*, making him lap or put his left legge over his Right, then turning your Rod backward, and jerking him gently on the left hinder thigh, make him bring his hinder parts to the Right ſide alſo, and ſtand in an even line as at the firſt, then make him remove his fore-parts more then before, ſo that he may ſtand, as it were, croſs over the even line, and then make him bring his hinder parts after, and ſtand in an even line again; and thus do, till by long practice he will move his fore parts and hinder parts both together, and goe ſide-long as farre as you pleaſe, then cheriſh him, and if you will have him go towards your left hand, do as you did before, uſing all your helps and correſtions on the right ſide onely. And thus much I think is ſufficient to have ſpoke touching all the ſeverall Leſſons meet to be taught to any Horſe whatſoever, whether he be for ſervice or for pleaſure, and which being performed artificially, carefully, and with patience, you may preſume your Horſe is compleat and perfect,

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perfect, the rather sith no man can find out any invention, or teach any other motion to a Horse, which may be good and comely; but you shall easily perceiue, that they are received from some one of these already rehearsed.

Riding before
a Prince.

Now if you shall be called to Ride before a Prince, you must not obserue the liberty of your own will; but the state of the person before whom you Ride, and the grace of the Horse which you ride; and therefore being come into the riding place, you shall chuse your ground, so that the Person before whom you are to ride may stand in the midst thereof, so as he may well behold both the passage of the Horse to him and from him: then being seated in a comely order, and every ornament about you handsonie and decent, you shall put your Horse gently forth into a comely trot, and being come against the Person of state, bow your body down to the crest of your Horse, then raising your selfe again, pass half a score yards beyond him, and there marking out a narrow Ring, thrust your Horse into a gentle gallop, and give him two or three managing turnes, in as short ground as may be, to shew his nimblenesse and readinesse: then upon the last turn, his face being toward the great person, stop him comely and close, and make him to advance twice or thrice; then having taken breath, put him into a gallop galliard, and so passe along the length of the even furrow with that salt, making him to do it also round about the Ring; then his face being towards the Prince, stop him and give him fresh breath, then thrust him into the *Capriole*, now and then making him yerke out behinde, yet so as it may be perceived it is your will, and not the Horses malice; and having gone about the Ring with that salt, and his face brought to look upon the Prince, stop him again and give him breath: then drawing nearer to the Prince, you shall beat the turn *Terra Terra*, first in a pretty large compass, then by small degrees straitning it a little and a little, draw it to the very center where you may give two or three close flying turnes, and then changing your hands undoe all that you did before, till you come to the Rings first largeness, then the Horses face being direct upon the Prince stop him, and put him into a corvet, and in that motion hold him a pretty space, making him to do the first in an even line, first to the right hand, then to the left, now back-

Of the Car-
gulo.

ward then forward again: and thus having performed every motion orderly and comely, bow down your body to the Prince; and so depart.

But if you intend to Ride only for Recreation, then you shall mark what Lesson your Horse is most imperfect in, and with that lesson you shall ever when you ride both begin and end; after it you shall fall to those lessons which are to your self most difficult, and by the practise of them bring your self to a perfectnesse; then consequently to all other lessons, repeating (as it were) every one over more or less, lest want of use breed forgetfulness, and forgetfulness utter ignorance; but if your Recreation in Riding be tyed to any special rules of health, and that your practise therein proceed more from the Commandment of your Physitian then your pleasure, then I would wish you in the morning first to begin with a stirring, or rough Lesson, as the gallop galliard, *boum*, or such like, which having a little stirred your blood, and made it warm, you shall then calme it again with a gentle manage, or the galloping of large Rings; then to stir your spirits again, to bring the horse down, or procure appetite, passe into the *capriole* or *crou*; and then to make quiet those moved parts, set the turn called, *Terra, Terra*, the *Incavire*, and such like. And thus one while stirring your blood, and another while moderately allaying such stirring, you shall give your body that due and proper exercise which is most fit for health and long life. Many other wayes this Recreation may be used for the good of a mans body, which because particular infirmities must give particular rules how and when to use it, I will at this time speak no further thereof, but refer the exercise to their own pleasures which shall practise the same, and to the good they shall find in the practice.

CHAP. III.

Of the breeding of all sorts of Horses, fit for the Husbandmans use.

THE minds of men being swayed with many various motions, take delight sometimes to be recreated rather with contemplative delights, then with active pleasures, and there is

strong reason therefore, because disability of body, or affaires of the Kingdome or Common-wealth, may take a man from those pre-occupations, which otherwise might stirre him to more laborious exercise; and of these contemplative Recreations. I can prefer none before that Gentlemanly and beneficiall delight of breeding creatures meet for the use of man, and the good of the Common-Wealth, wherein he liveth : and of these breedings I cannot esteem any so excellent, as the breeding of Horses, both for the pleasure we gaine thereby in our own particular service, and also for the strength, defence, and tillage of the Kingdome.

The breeding
of Horses.

He therefore that suteth his recreation to the breeding of horses must first have respect unto the ground whereon he liveth or enjoyeth ; for every ground is not meet to breed on, but some too good, some too bad : some too good, because they may be exhausted to a more beneficiall commodity, Horses having a world of casualties attending on them, and many years before the true profit doth arise and some too bad, because the extreame barrennesse of the same will deny competent nourishment to the thing bred, and so to the losse of time and profit adde mortality.

Grounds to
breed on.

The grounds then meet to breed horses on, would neither be extreame fruitfull, nor extreame barren, but of an indifferent mixture, yeeld rather a short sweet burthen, then a long, rich and fruitfull, it would rather lye high then low, but howsoever firme and hard under the foot; it would be full of Mole-hills uneven treadings, hills, and much cragginessse, to bring Colts to nimbleness of foot, it would have good store of fresh waters, an open sharp ayr, and some convenient covert ; and this ground is best, if it be severall and inclosed, yet may be bred upon, though it be open, and in common, only some more carefulnesse to bee looked for, a little before, and in the time of Foaling. Nay, the grounds which are neither severall nor common, are very good also to breed on, and those be your teathering grounds, which we call particular grounds ; for though they be proper commonly to one man, yet they are not divided nor eaten otherwise then at the owners pleasure : And these teathering grounds are as good as any grounds for the first nourishing of a Foale, if they be

be amongst Corn-grounds or any grain except pease only.

If you have much ground to breed on, you shall divide it in- Division of
to many pastures, the least and barrenest for your Stallion to grounds
run with your Mares in, those which have least danger of waters
are for your Mares to foal in, the fruitfulest and of best growth,
for your Mares to give milk in; and the most spacious and uneven-
est to bring up your Colts in, after they are weaned.

For the choice of a good Stallion, and which is best for our Choice of
Kingdome, opinion swayeth so far, that a man can hardly give Stallion, and
well received Directions : yet surely if men will be ruled by the which are
truth of experience, the best Stallion to beget horses for the Wars best.
is the *Courser*, the *Jennet*, or the *Turks*; the best for coursing and
running is the *Barbary*; the best for hunting is the *Bastard cour-*
ser begot of the *English*; the best for the Coach is the *Flemish* the
best for travell or burthen is the *English*, and the best for ease is
the *Irish hobby*.

For the choyce of *Mares*, you shall greatly respect their shapes Choyce of
and mettals, especially that they be beautifully fore handed for Mares.
they give much goodnesse to their Foales : and for their kinds,
any of the *Races* before spoken of is very good, or any of them
mixt with our true English *Races*, as *Bastard-courser*, *Mare*, *Ba-*
stard-Jennet, *Bastard-Turke*, *Barbary*, &c.

The best time to put your Stallion and Mares together is in When to put
the middle of *March*, if you have any grass, as you should have them together
great care for that purpose, and one foal falling in *March*, is
worth two falling in *May*, because he possesseth, as it were, two
winters in a year, and is thereby so hardned, that nothing can
(almost) after impare him, and the best time to take your horse
from the Mares again, is at the end of *April*, or middle of *May*,
in which you shall note, that from the middle of *March*, till the
midst of *May*, you may at any time put your Stallions to your
Mares, and a months continuance is ever sufficient : provided e-
ver, as near as you can, that you put them together in the increase
of the Moon; for Foals got in the wane are not accounted strong
or healthfull.

For covering of Mares, it is to be done two wayes, out of Of covering
hand, or in hand; out of hand; as when the Horse and Mares run Mares.
together abroad, as is before said; or turned loose into some
empty

empty; barn for threenights one after another, which is the surest and the safest way for a Mares holding; or in hand, early in a morning, and late at an evening two or three dayes together, when you bring the Horse to the Mare, and make him cover her once or twice at a time holding Him fast in your hand, and when the act is done, lead him back to the stable; and in this act you shall ever observe, as soon as the Horse cometh from her back, presently to cast a pail of cold water on her hinder parts, or else to chase her swiftly, up and down, for fear, by standing still she cast out the seed, which is very ordinary.

To know if a Mare hold.

To know whether your Mare hold to the Horse or no, there be divers wayes, of which the best is by offering her the Horse again at the next increase of the Moon, which if she willingly receive, it is a sign she hold not before; but if she refuse, then it is most certain she is sped, or if you powre a spoonfull of cold vinegar into her ear, if she shake only her head, it is a signe she holds; but if she shake head, body, and all, then truly it is a sign that she doth not hold: Lastly, if after she is covered, you see her scour, her coat grow smooth and shining, and that she doth (as it were) renew and increase in liking, it is a sign she holds: but if she hold at a stay without any amendment, then offer the Horse again for she is not served.

To conceive Male foals.

To make your Mares conceive most male Foales, you shall be sure to keep your Stallion proud, and your Mare poor, that his lust mastering hers, he may only be predominant and chief in the action: many other rules fancy deviseth, but they are in their ends, and I would by no means have this discourse capable of any uncertainty.

To provoke lust.

If you have any advantage given you by friendship, or otherwise whereby you may have a Mare at the present very well covered, only yours is not yet ready for the horse, you shall in this case to provoke lust in her, give her to drink good store of clarified hony, and new milk mixt together, and then with a bush of nettles all to nettle her privy parts, and then immediately offer her to the Horse.

To keep Mares from barrenness.

To keep your Mares from barrenness, and to make them ever apt to conceive foals, you shall by no means feed too extreame fat, but keep them in a middle state of body by moderate labour

bour, for the leaner they are when then they come to take Horse, the much better they will conceive,

After you if Mares have been covered, and that you perceive in them the marks of conceiving, you shall let them rest three weeks or a month, that the substance may knit; then after, moderately labour or travel the n, till you see them spring, and then turn them abroad, and let them run till they foale; for to house them after is dangerous and unwholsome.

Ordering of
Mares after
covering.

If your Mare be hard of foaling, or will not cense after she hath foaled, you shall take a pint of running water, wherein good store of fenell hath been boyled. and as much Strong, old, sweet wine, with a fourth part of the best Sallet oyl, and having mixt them well together, being but luke warm, pour it into her nostrils, and then hold and stop them close, that she may strain her whole body, and it will presently give her ease.

A help for
Mares after
foaling.

As soon as your Mare hath foal'd, you shall remove her into the best grass you have, which is fresh and unfoyled, to make her milk spring; and if it be early in the year, you shall have a care that there be good shelter in the same, and there let her nourish her foal most part of the summer following.

Ordering of
Mares after
foaling.

As touching the weaning of foals, though some use to weane them at *Michaelmas*, or *Martilmas* following; out of a supposition that the winter milk is not good or wholsome, yet they are much deceived; and if you can by any convenient meanes (saving greater losses) let your foals runne with their Dams the whole year, even till they foale againe, for it will keep the foal better In health, in more lust, and least subject to tenderness.

Weaning of
Foals.

When you intend to wean your foals, you shall take them from their Dams over-night, and drive them into some empty house, where they may rest; and the Mares be free from their noyses; then on the morning following give to every foal fasting a branch or two of *Saves* annoynted or rold in butter, and then having fasted two hours after, give him a little meat, as grasse, hay, or gaubadge of Corn, with some clear water, and do this three dayes together; then seeing that they have forgotten their Dams, geld such Colt-foals, as you intend to make geldings of; and after their swellings are past, put them unto your other Colt-foales

Ordering af-
ter the wean-
ing.

foales

foals into a pasture provided for them by themselves, and your Filly-foals into another by themselves : which Pastures may either be high Woods, Commons, or such like spacious peeces of ground, where they may run till they be ready for the Saddle.

Gelding of
Colts.

Now, albeit I proportion unto you this manner of gelding of Foals, yet I would have you know that the best and safest way to geld them is, if it may be under the Dam when they suck, as at nine, or at fifteen dayes of age, if the stones appear, or else so soon as you can by any means perceive them fall down into the Cod, for then there will be no danger of swelling, or other mischiefs, which commonly attend the action. And thus much touching the breeding of Horses, and the observations due to the same through all the courses and passages thereof, as hath been found by ancient practice and experience, as appears in my *Master-piece*.

CHAP. IV.

Of Horses for travel, and how to make them amble.

THE Husbandman, whose occupation is the generall affair: of the Common-wealth as some to the market, some to the City, and some to the seats of Justice, must necessarily be imployed almost in continuall travell; and therefore it is meet that he be provided ever of a good and easie travelling horse.

The marks of
good travel-
ling Horse.

The marks whereby he shall chuse a good travelling horse, are these, he shall be of good colour and shape, lean headed and round foreheaded, a full eye, open nostrill, wide jawed, loose thropled, deep neckt, thin crested broad breast, flat chinn'd, out ribb'd, clean limb'd, short joynted, strong hoofed, well mettall'd, neither fiery nor craving, stiff on in every member, and easie to mount and get up upon; he shall follow without haling, and stand still when he is restrained.

To make a
Horse amble.

Now so far as there are a world of good horses which are not easie, and a world of easie horses which are not good, you shall by these directions following, make any horse amble whatsoever: first, then you shall understand that practice hath made divers men believe that divers wayes they can make a horse amble,

amble as by gaging them in the mouths, by toying them in deep earth, by the help of shooes, by gallopping and syring, or such like, all which are ill and imperfect; yet the truth is, there is but one certain and true way to compass it, and that is to make a strong garth web, flat and well quilted with cotten, four pasterns for the smalls of his fore-legs, under his knees, and for the smalls of his hinder legs somewhat below the spavins joynts: to these pasterns you shall fix strong straps of leather, with good iron buckles to make shorter or longer at pleasure, and having placed them about his fore legs, you shall take two severall round ropes of an easie twist, made with strong loops at either end, and not above eight handfulls in length, and these the horse standing to a true proportion, you shall fasten to the four straps of leather, to wit, one of them to his near fore-legge, and his near hinder legge, and the other to his far fore-leg, and his far hinder legge, which is called amongst Horse-men trammelling; with these you shall let him walk in some inclosed piece of ground, till he can so perfectly go in the same, that when at any time your offer to chase him, you may see him amble swiftly and truly: then you shall take his back, and ride him with the same trammels, at least three or four times a day till you find that he is so perfect, that no way can be so rough and uneven, as to compell him to alter his stroke or go unnimble. This done, you may first take away one trammel, then after the other, and onely wreath about under his fore-feet locks thick and heavy, great royls of Hay or Straw Ropes. and so ride him with the same a good space after; for it will make him amble easie, then cut them away, and ride and exercise him without any thing but the ordinary help of the bridles, and there is no doubt but he will keep his pace to your full contentment and pleasure.

Of trammel
ling.

Of whifping.

Now during this time of your teaching, if your horse strike not a large stroak, and over-reach enough, then you shall make the trammel the straiter, but if he over-reach too much, then you shall give it more liberty: and herein you shall find, that an inch straitning, or an inch enlarging will adde or abate at least halfe a foot, an whole foot and direct stroak: and thus much touching the teaching of any horse to amble, of what nature or quality soever he be, or how unapt or untoward soever to learn.

CHAP. V.

Of the ordering and dieting of the Hunting-Horse.

SOME love hunting for the exercise of their own bodies, some for the chase they hunt, some for the running of the hounds, and some for the training of their Horses whereby they may find the excellency of their goodnesse and indurance : to him therefore which placeth his delight in the goodnesse of his horse I would wish him thus to order and dyet him, and he shall most assuredly come to the true knowledge of the best worth which is within him ; and if in these rules, which I now shew, I be lesse curious then formerly I have been, let no man wonder thereat, but know that time (which is the mother of experience) doth in our labours shew us more new and more neerer wayes to our ends, then at the first wee conceived : And though when I first practised this Art; I knew not how to bring a very fat horse from *Michaelmas* till *Christmas*, to shew his utmost perfection, I know now in two months (though never so foul) how to make him for any wager, daring now boldly to adventure on that, with which before I thought almost present death to offer; thus doth observation and labour find out the darkest secrets in Art.

Taking up of
the Hunting
Horse.

To begin then with the first ordering of a Hunting Horse, you shall know that the best time to take him from grass is about *Bartholmen-tide*, the day being fair, dry, and pleasant, and as soon as he is taken up to let him stand all that night in any vast house to empty his body, the next day stable him, and give him wheat straw, if you please, but no longer in any wise ; for though the old rule is to take up horses bellies with straw, yet it straitneth the guts, heats the liver, and hurteth the wind: therefore let only moderate exercise, as riding him forth to water morning and evening, and other aydings do what you expect straw should; and for his food let it be hay that is sweet though rough, and either old, or at least well sweat in the Mow.

Cloathing the
Horse.

After his belly is emptied, you shall cloath him first with a single cloath, whilst the heat indureth, and after with more, as you shall see occasion require, and when you begin to cloath the horse, then shall you dresse, curry, and rub him also. Now for as much as it is a rule with ignorant Horsemen, that if they have
but

but the name of keeping a Hunting horse, they will with all care (without any reason) lay many cloaths upon him, as if it were a speciall Phyllick, you shall know they are much deceived therein, and may sooner doe hurt than good with multiplicity of cloaths; therefore to cloath a horse right, cloath according to the weather, and the temper of his body; and thus if you see your horse be sleight, smooth and well coloured, then cloath him temperately, as with a single cloath of canvase or sackcloath at the most; and if then as the year grows colder, you find his hair rise or flare about his neck, flanks, or outward parts, then you shall adde a woollen cloath, or more if need require, till his hair fall smooth again, holding it for your rule, that a rough horse shewes want of cloath, and a smooth coat cloathing enough, yet if your horse have been clean fed, taken exercise sufficient, and hath not much glut within him, if then you find that in the night he sweateth in his cloaths, then it is a sign he is overfed; but if he be foul inwardly, or hath no sweat formerly, and now sweats comming to good feeding, then you shall augment rather than diminish any cloathing for his soules sake, but then breaketh out, and being evacuated, he will come to drynesse of body again, and so continue all the year after: and surely for an ordinary proportion of cloaths, I hold a canvase cloath, and a cloath of House-wives woollen to be at full sufficient for a Hunting Horse.

A Hunting horse would be drest in his dayes of rest, twice a day, that is, before he go to his morning watering, and before he go to his evening watering; for the manner of his dressing after he is uncloathed, you shall first curry him from the tips of the ear, to the setting on of his tayle, all his whole body most intirely over with an iron comb, his legges under the knees and cambrels only excepted; then you shall dust him, then curry him again all over with a round brush of Bristles, then dust him the second time, then rub all the loose hairs away with your hands wet in cleane water, and so rub till the horse be as dry as at the first, then rub all his body and limbs over with an hair cloath: lastly, rub him over with a fine white linnen rubber, then pick his eyes, nostrils, sheath, cods tuell, and feet very clean, and so cloath him, and stop him round with wisps, if you

Of Dressing
the Hunting-
Horse.

water within the house ; otherwise saddle him after his body is wrapt about in a woollen cloath, and so ride him forth to the water.

Of watering
the hunting
horse.

The best water for a hunting horse, is either a running River, or a clear Spring, remote from the stable a mile, or a mile and a half at most, and near unto some plain piece of ground, where you may scope and gallop after he hath drunk ; and as soon as you bring your horse to the water, let him take his full draught without trouble or interruption : then gallop and scope him up and down a little, and so bring him to the water again, and let him drink what he please, and then gallop him again : and thus do, till you find he will drink no more ; then having scop't him a little, walk him with all gentleness home, and there cloath him up, stop him round with great soft wisps, and so let him stand an hour upon his bridle, and then feed him.

Of feeding
the hunting
horse.

To speak first for the food for hunting horses, the most ordinary is good sweet sound oats, neither throughly dried with age, or else on the Kiln, or in the Sun, and if your horse be either low of flesh, or not of perfect stomach, if to two parts of those Oats you ad a third part of clean old beans, it shall be very good and wholesome, and if your horse be in dyet for a match, and have lost his stomach if then you cause these beanes to be spelted upon a mill, and so mixt with Oats ; it will recover him. The next food, which is somewhat stronger and better, is bread thus made, take two bushels of good clean beans and one bushell of wheat, and grind them together ; then through a fine Range, bolt out the quantity of two pecks of pure meal, and bake it in two or three loaves by it self, and the rest sift through a meal sieve : and knead it with water and good store of barme, and to bake it in great loaves, and with the courser bread feed your horse in his rest, and with the finer against the dayes of sore labours. Now for the hours of his feeding it shall be in the morning, after his coming from water, an hour after high noon, after his coming from his evening water, and at nine or ten of the clock at night upon the dayes of his rest ; but upon the dayes of his exercise, 2 hours after he is throughly cold inwardly and outwardly and then after according as before mentioned. Lastly, for the proportion of food, you shall know no certain quantity, but ac-

according to the horse's stomach, that is to say, you shall feed him by a little at once, so long as he eats with a good appetite; but when he begins to refuse or fumble with his meat, then to give him no more. Now for his hay, you shall see that it be dry, short, uplandish hay; and so it be sweet, respect not how coorse or rough it is, sith it is more to scour his teeth, and cool his stomack, then for any nourishment expected from it.

Touching the Horses exercise, which is only in the following of The exercise of the horse. the hounds, you shall be sure to train him after those which are most swift and speedy; for so you shall know the truth, and not be deceived in your opinion. Touching the dayes, it shall be twice a week at least, but most commonly thrice, as for the quantity of his exercise, it must be according to his foulness or cleanness: for if he be very foul, you must then exercise moderately to break his grease: if half foul half clean, then somewhat more to melt his grease: and if altogether clean, then you may take what you please of him (provided, that you do nothing to discourage his spirits, to abate his mettal or to lame his limbs) and after every dayes exercise, be assured either to give him the same night, or the next day following, something by way of scouring; or otherwise, to take away the grease formerly melted, by means whereof you shall be ever sure to keep your horse in all good health and perfection.

The best and most excellent way to scour or purge your The scouring of the horse. horse from all grease, glut, or thickiness within his body, which is a secret hitherto was never either sufficiently taught, or perfectly learned, is to take of Anniseeds three ounces of Cummin-seeds six drams, of Carthamus a dramme and a half, of Fenugreek seed one ounce two dramms, of Bluestone one ounce and a half, beat all these to a fine powder, and searse them: then take of Sall-t-cyle a pint and two ounces, of honey a pound and a half and of white wine four pints, then with as much fine white meal as will suffice make all into a strong stiffe paste, and knead and work it well: this paste keep in a cleane cloth, for it will last long, and after your horse hath been hunted, and is at night, or in the morning exceeding thirsty, take a ball thereof as big as a mans fist, and wash and dissolve it in a gallon or two of cold water, and it will make the water look white like milk: then offer it

it the horse to drink in the dark, lest the colour displease him : if he drink it, then feed him : but if he refuse to drink it, yet care not, but let him fast without drink till he take it, which assuredly he will doe in twice or thrice offering, and after once he hath taken it, be then assured he will forsake any other drink for it, of this drink, your horse can never take too much nor too oft ; if he have exercise: or otherwise it feeds too sore. For all inward infirmities whatsoever it is a present remedy : therefore I would not wish any horsemen of vertue at any time to be without it; and being once made, it will last three or four months at least.

Ordering of a
Horse after
exercise.

After your Horse hath been exercised either with Hunting, running train-sets, or otherwise : you shall ever cool him well in the field before you bring him home : but being come to the stable you shall neither wash nor walk, but instantly house him give him store of fresh litter and rub him therewith, and with dry cloaths, till there be not a wet hair about him, then cloath him with his ordinary cloaths, and wipe him round : then cast another spare cloath over him, which you may bate at your pleasure, and so let him stand till it be time to feed him. And thus you may keep any hunting horse either for match or otherwise, in as good state and strength as any Horseman in this Nation, though he exceed you far both in reputation and experience.

CHAP. VI.

Of the ordering and dysting of the Running Horse.

IF any Husbandman have his mind taken up only with the delight of running Horses ; which is a noble sport, and though not of so long indurance, yet equall with any before spoke of he shall for the bettering of his knowledge give to his memory these few rules following, by which he shall rightly order and dyst him.

Of his taking
up.

First, for his taking up from grass (for there for order sake we must first begin) it shall be at the same time of the year, and after the same manner that you took up your hunting horse, and till you have enfeamed him, hardened his flesh, taken away his inward grease, and brought him to a good perfectness of wind, you shall cloath him, dresse him, water him, feed him, exercise him

him, purge him and order him after labour, in all poynts and in all thing as you did your hunting horse.

When he is thus cleau of body and wind, you shall then lay on some more cloaths, then you did on your hunting horse, to him, Of cloathing purge his body a little the more, and to make him the more apt to sweat, and evacuate humors as they shall grow : the ordinary quantity whereof, would be a warme narrow wollen cloath about his body on either side his heart, then a fair white sheet, a woollen cloath about it, and a canvase cloath or two above it, and before his breast a woollen cloath at least two double : he would continually stand upon a clean litter, and have his stable very dark, and perfumed with Juniper, when as the strength of his dung shall annoy it.

For this dressing it shall be in all poynts done as you did to your hunting horse, onely to dresse him once a day is sufficient, Of dressing him. and that ever in the afternoon : but for rubbing his limbs or body with dry cloaths or wisps, you shall do as often as you come into the stable, provided that you turn but his cloaths up, but not take them from his body.

You shall water your running horse as you watered your hunting horse, and give him the same exercise after it, only you shall not bring him into the stable of at least an hour and more after he is watered. Of watering him.

The best food for your running horse, is either good sweet Oats well dried, sunned, and beaten, or bread made of two parts wheat, and but one part beans, and boulded, and sifted, and knodden, as was before shewed, only if you adde to your better sort of bread the whites of twenty or thirty Egges, and with the barm a little : Ale also, it will be much the better ; for you shall not respect how little water you use at all : the hours you feed in, and the quantity of the food shall be the same, and in the same manner as was mentioned before, for the hunting horse, yet with these observations, that if your horse be very lean, sickly, and have a weekey stomach, that then you may as before shewed, give him with his Oats a few spelted beans, or else wash his Oats in strong Ale, or Beer, or in the whites of a couple of eggs. Of feeding him.

Touching his exercise, it consisteth in two kinds, the one ayring, Of his exercise the other coursing : ayring is a moderate and gentle exercise by ayring, which

which you shall use morning and evening, by riding or leading your horse a foot pace (but riding is better and lesse in danger of cold) in the morning after his water up to the hills, and in the evening after his water by the River-side, by the space of an hour or two together ; and before you lead him forth to ayre, you shall be sure to give him a rare Egge broken into his mouth as soon as his bridle is put on for it will increase wind : and this ayring you shall by no means forbear, be it upon his dayes of purging or sweating, or when it much raineth, for then to ayr is unwholsome. Again, if your horse be very fat, you shall ayr before Sun rise, and after Sun set: but if he be lean, then you shall let him have all the strength and comfort of the Sun you can devile ; and during this ayring, you shall be sure that your horse be cloathed very warm, especially before the breast and on each side the heart, for cold to a running horse is mortall.

*Exercise by
coursing.*

You shall course your horse according to his strength and ability of body that is to say, twice a week, thrice, or as oft as you see cause, and you shall course him sometimes in his cloaths to make him sweat, and consume his greafe, and that must be done moderately and gently and sometime without his cloath, to increase wind; and that shall be done sharply and swiftly : you shall by keeping your horse fasting the night before, be sure that his body be empty before he do course, to wash his tongue and nostrils with vinegar, or to piss in his mouth ere you take his backe is very wholsome : you shall lead him in your hand well and warm cloathed to the course, and there uncloath him and rub his limbs well : then having courst him, after a little breath taking, cloath him again and so ride him home, there rub him thoroughly, and let him stand till he be fully cold, which perceived, let his first meat you give him, be a handfull or two of the ears of Pollard Wheat : then after, his ordinary food as aforesaid.

Of sweats.

There is also another exercise for your running horse which is, sweats in his cloaths, either abroad or in the house, for sweats in his cloaths abroad, they are those which are taken upon the course, and are formerly spoke of, that they must be given by a moderate gallopping, no man running, and as soon as your horse hath past over his course, and is in a high sweat, you shall instantly

instantly have him home and there lay more cloaths upon him and keep him stirring till he have sweat so in the stable an hour or more, then abate his cloaths by little and little, till he be perfectly cooled and dried; which you must further by rubbing him continually with dry cloaths, and by laying dry cloaths on, and taking the wet away: but for sweats in his cloaths, without any exercise abroad, you shall give them either when the weather is so much unseasonable, that you cannot go forth, or when your horse is so much in danger of lameness, that you dare not strain him; and you shall do it thus: First take a blanket folded and warmed very hot and wrap it about his body, then over it lay two or three more, and wisp them round, then over them as many cover-lids, and pin them fast and close; then make the horse stir up and down the stable till he begin to sweat, then lay on more cloaths, and as the sweat trickleth down his face, so rub it away with dry cloaths till he have sweat sufficiently; then (as before is shewed) abate the cloaths by little and little, and rub him in every part, till he be as dry as at first.

After every course or sweat, you shall scour or purge your horse in the same manner, and with the same medicine that you did your Hunting-horse; for it is the best that can by art be invented, being both a purge and a Restorative, cleansing and comforting all the parts of a Horse's body: but if you think it purgeth not enough, then you shall take twenty Raisins of the Sun, the stones pickt out, and ten Figs slit in the midst, boyl them in a pottle of fair running water, till it come to be thick, then mixe it with powder of Lycoras, Anniseeds, and Sugar canly, till it come to a stiff paste, then make pretty round balls thereof, and roule them up in butter, and give your horse three or four of them, the next morning after his sweat or course, and ride him an hour after, and then let him up warm.

After your horse hath been courst or sweat, and is as before said cold and dry, you shall then unbridle him, give him some few wheat eares, and then at an hour or two after, give him a very sweet mash, then some bread after, then at his due hour dresse him, and give him when you find him thirsty some cold water, with a ball of your leaven dissolved into it, and so let him stand till you feed him for all night.

Ordering after exercise.

General rules
for a Running
Horse.

Courſe not your Horſe ſore for at leaſt four or five dayes before you run your match, leſt the ſoreneſſe of his limbs abate him of his ſpeed.

Except your horſe be a very ſoul feeder muzzle him not above two or three nights before his match, and the night before his bloody courſes.

Give your horſe as well his gentle courſes, as his ſharp courſes upon the Race he muſt run, that he may as well find comfort as diſpleaſure thereon.

In training your horſe, obſerve not the number of the miles, but the labour fit for your horſe.

Be ſure upon the match day that your horſe be empty, and that he take his reſt untroubled, till you prepare to lead him forth.

Shoe your horſe ever a day before you run him, that the pain of the hammers knocks may be out of his feet.

Saddle your Horſe on the Race day in the ſtable before you lead him forth, and fix both the pannel and the girths to his backe and ſides with ſhoe-maker's waxe, to prevent all dangers.

Lead your Horſe to his courſe with all gentleneſſe, and give him leave to ſmell to other horſes dung, that thereby he may be inticed to ſtate and empty his body as he goes.

When you come to the place where you muſt ſtart, firſt rub his limbs well, then uncloath him, then take his back, and the word given, ſtart him with all gentleneſſe and quietneſſe that may be, leſt doing any thing raſhly, you happen to choak him in his own wind.

And thus much for the ordering and dyeting of the Running horſe, and the particularities belonging to the ſame.

CHAP. VII.

The ordering of the travelling Horſe.

General rules
for a travelling
horſe.

NOW for our Husbandmans Travelling horſe, which is to carry him in his journeys, and about his buſineſſe in the Country, he ſhall firſt feed him with the beſt ſweet hay, dry oats or dry beans and oats miſt together: in his travell he ſhall feed him according to his ſtomack, more or leſſe, and in his reſt at a certain

certain proportion ; as half a peck at each watering, is utterly sufficient.

If you travell feed your horse early, that he may take his rest soon.

In travel by no means wash nor walk your horse, but be sure to rub him clean.

Water him a mile before you come to your Inne, or more, as shall lye in your journey, or if you fail thereof, forbear it till next morning: for water hath often done hurt, want of water never did any.

Let your horse neither eat nor drink when he is extream hot for both are unwholsome.

When the dayes are extream hot, labour your horse morning and evening, and forbear high-noon.

Take not your saddle off suddenly, but at leisure, and laying on the cloath, lay on the saddle again till he be cold.

Litter your Horse deep, and, in the dayes of his rest, let it also lye under him.

Dresse your horse twice a day when he rests, and once when he travells.

If the horse be stoned let him go to the soyl, and be purged with grasse in May: a months time is long enough, and that grasse which grows in Orchards under trees is best.

Let him blood, spring and fall, for they are the best times to prevent sicknesses.

In your journeying light at every steep hill, for it is a great refreshing and comfort to your horse.

Before you sleep, every night in your journey see all your horses feet stopt with Oxe dung, for it taketh away the heat of travell and subating.

Many other necessary rules they are, but so depending upon these already shewed, that who so keepeth them shall not be ignorant of any of the rest ; for they differ more in name than nature.

CHAP. VIII.

How to cure all generall inward sicknesses in horses, which trouble the whole body; of Fevers of all sorts, Plagues, Infections, and such like.

Sicknesses in general are of two kinds, one offending the whole body, the other a peculiar member: the first hidden and not visible, the other apparant and known by his outward demonstration. Of the first then, which offend the whole body, are Fevers of all sorts as the Quotidian, the Tertian, the Quartan, the Continuall, the Hittique, the Fevers in Autumn, in Summer, or in Winter, the Fever by surfeit, Fever Pestilent, Fever Accidentall, or the generall Plague, they are all known by these signs, much trenbling, panting, and sweating, a full countenance that was wont to be cheerefull, hot breath, faintness in labour decay of stomack, and costiveness in the body; any, or all of which when you perceive, first let the horse blood, and after give him this drink: Take of *Selladine* roots leaves and all a good handfull, as much *Wormwood* and as much *Ren*, wash them well, and then bruise them in a morter, which done, boyl them in a quart of Ale well, then strain them and adde to the liquor half a pound of sweet butter, then being but luke-warm give it the horse to drink, or half an ounce of *Diapent*, in a pint of Muscadine.

CHAP. IX.

Of the Head-ach, Frenzie, or Staggers.

THE signs to know these diseases, which indeed are, all of one nature, and work all one effect of mortality are hanging down of the head, watry eyes, rage and reeling. And the cure is to let the horse blood in the neck three mornings together, and every morning to take a great quantity then after each morning blood-letting, to give the horse this drink: Take a quart of Ale, and boyl it with a big white bread crust, then take it from the fire, and dissolve three or four spoonfulls of honey in it, then luke warm give it the horse to drink, and cover his temples over with a playster of Pitch; and keep his head exceeding warm, let his meat be little, and his stable dark: but to give him

The Cure.

The Cure.

him the former quantity of *Diapente*, either in Muskadine or honey water is the best cure.

CHAP. X.

Of the sleeping Evill.

THE Sleeping Evill or Lethargie in Horses proceeds from cold stany moiſt humors, which bind up the vitall parts and makes them dull and heavy. The signes are continual sleeping or desire thereunto. The cure is, to keep him much waking, and twice in one week to give him as much sweet soap (in nature of a pill) as a Ducks egge, and then after give him to drink a little new milk and honey, which is the onely cure at the first, for this disease. But to be certain I pray look in my Master peece, and there you shall find of the infirmity more largely discoursed of, this being but a general cure of all cattell, and not particularly handled of horses, as that is. The Cure.

CHAP. XII.

*Of the Falling Evill, Planet-stroke, Night-mare,
or Palfey.*

THough these diseases have severall faces, and look as though there were much difference between them, yet they are in nature all one, and proceed all from one effence, which is only cold flegmatick humors, ingendred about the brain, and benumbing the senses, weakning the members, sometimes causing a horse to fall down and then it is called the falling evil; sometimes weakning but one member only, then it is called Planet-stroke sometimes oppressing a horses stomach, and making him sweat in his sleep, and then it is called the Night-mare; and sometimes spoyleing an especial member, by some strange contraction, and then it is called a Palfey. The cure for any of these infirmities The Cure. is to give the horse this purging pill: Take of Tar three spoonfulls, of sweet butter the like quantity, beat them well together with the powder of *Lycoris*, *Annis seeds*, and *Sugar-candy*, till it be like paste, then make it into three round balls, and put into each ball two or three cloves of Garlick, and so give them unto the horse; observing to warme him both before and after, and keep him fasting two or three hours likewise, both before and after.

CHAP.

CHAP. XII.

Of the generall Cramp, or Convulsion of Sinews.

The Cure.

CRamps are taken to be the contraction or drawing together of the sinews, of any one member, but Convulsions are when the whole body, from the setting on of the head to the extreamest parts are generally contracted and stiffned. The cure of either is, first to chafe and rub the member contracted with vinegar and common oyle, and then to wrap it all over with wet Hay, or rotten litter, or else with wet woollen cloaths, either of which is a present remedy.

CHAP. XIII.

Of any cough or co'd whatsoever, wet or dry, or for any consumption or putrifaction of the Lungs whatsoever.

ACold is got by unnaturall heats, and too suddain coolings, and these colds ingender coughs, and those coughs, putrifaction or rottenesse of the Lungs. The cure therefore for them all in generall, is to take a handfull or two of the white and greenish Mosse which grows upon an old Oke-pole, or any old Oke-wood, and boyl it in a quart of milk; till it be thick, and being cold turned to a Jelly, then strain it, and give it the Horse luke-warm every morning till his cough end; or else take three quarters of an ounce of the conserve of *Elicampane*, and dissolve it in a pint of Sack, and luke warm give it the horse fasting; then ride him after it, and set him up warm, feed as at ordinary times; thus do three mornings together.

CHAP. XIV.

Of the running Glanders, or the mourning of the Chine.

TAKE of *Auripigmentum* two drams, of *Tussilaginis* made into powder as much, then mixing them together with Turpentine till they be like paste, and making thereof little cakes, dry them before the fire; then take a chafing-dish and coals, and laying one or two of the cakes thereon, cover them with a tunnell, and then the smoke rising, put the tunnel into the horse's nostrils.

nostrils and let the smoak go up into his head : which done ride the horse till he sweat : do thus once every morning before he be watered, till the running at his nostrils cease, and the kimbels under his chaps wear away.

CHAP. XV.

Of hide-bound, or consumption of the flesh.

Hide bound or consumption of the flesh, proceeds from unreasonable travell, disorderly dyet, and many surfeits. It is known by a generall dislike and leanness over the whole body and by the sticking of the skin close to the body, in such sort that it will not rise from the body. The cure is, first to let the horse The Cure. blood, and then give him to drink three or four mornings together a quart of new milk, with two spoonfulls of honey, and one ounce of *London treacle* : then let his food be either sodden Barly, warm Grains and Salt, or Beans spelted in a Mill, his drink Masses.

CHAP. XVI.

Of the breast pain, or any other sickness proceeding from the heart, as the Anticor, and such like.

These Diseases proceed from too rank feeding, and much fatness; the signs are a faulting in his fore-legs, a disableness to bow down his neck, and a trembling over all his body. The The Cure. cure is, to let him blood, and give him three mornings together two spoonfulls of *Diapent* in a quart of Ale or Beer, for it alone putteth away all infection from the heart.

CHAP. XVII.

Of tyred Horses.

If your Horse be tyred either in Journeying or any Hunting match, your best help for him is to give him warm Urine to drink, and letting him blood in the mouth to suffer him to lick up and swallow the same : Then if you can come where any nettles are, to rub his mouth and sheath well therewith : then gently to ride him untill you come to your resting place, where set him up very warm, and before you go to bed give him sixe spoonfulls of *Aqua vita* to drink and as much provinder as he will

will eat. The next morning rub his legs with sheeps foot oyle, and it will bring fresh nimbleness unto his sinews.

CHAP. XVIII.

Of diseases in the stomach, as surfeits, loathing of meat or drinke, or such like.

IF your horse with the glut of provender, or eating raw food. have given such offence to his stomach that he casteth up all he eateth or drinketh, you shall first give him a comfortable drench, as *Diapente*, or *Trepanum cor* in Ale or Beer; and then keeping him fasting, let him have no food but what he eateth out of your hand which would be bread well bakt and old, and after every two or three bits a lock of sweet hay: and his drinke would be only new milk till his stomach have gotten strength and in a bag you shall commonly hang at his nose lowre hrown bread steeped in vinegar, at which he must ever smell, and his stomach will quickly come again to his first strength.

CHAP. XIX.

Of Foundring in the body.

Foundring in the body is of surfeits the mortallest and soonest gotten: it proceedeth from intemperate riding a horse when he is fat, and then suddainly suffering him to take cold; then washing a fat horse, there is nothing sooner bringeth this infirmity. The signs are sadness of countenance, staring hair, stiffness of limbs, and losse of belly: and the cure is only to give him wholesome strong meat, as bread of clean beans, and warm drink, and for two or three mornings together a quart of Ale brewed with Pepper and Cinamon, and an ounce of *London treacle*.

The Cure.

CHAP. XX.

Of the Hungry evil.

The hungry Evil is an unnaturall and over hasty greediness in a horse to devour his meat faster than he can chew it, and is only known by his greedy snatching at his meat, as if he would devour it whole: The Cure is, to give him to drink milk and wheat meal mixt together by a quart at a time, and to feed him with provender by a little and a little till he forsake it.

The Cure.

CHAP.

CHAP. XXI.

Of the diseases of the Liver, as inflammations, Obstructions, and consumptions.

THE Liver, which is the vessel of blood, is subject to many diseases, according to the distemperature of the blood, and the signs to know it, is a stinking breath, and a mutual looking towards his body: and the cure is, to take *Aristolugia longa*, and boyl it in running water, till the half part be consumed, and let the horse drinke continually thereof, and it will cure all evils about the Liver, or any inward conduits of blood.

CHAP. XXII.

Of the diseases of the Gall, and especially of the Yellows.

FROM the over flowing of the Gall, or rather want of the Gall, which is the vessel of choller, spring many mortal diseases, especially the Yellows, which is an extream faint mortal disease, if it be not prevented betime: the signs are yellowness of the eyes and skin, and chiefly underneath his upper lippe, and on his fore-teeth, a sudden and faint falling down by the side of the stall, in the stable, and an universal sweat over all the body. The cure is, first to let the horse bleed in the neck, in the throat, and under the eyes, then take two-penny-worth of *Saffron*, which being dried and made into fine powder, mix it with sweet butter, and in manner of a pill give it in balls to the horse, three mornings together: let his drink be warm, and his hay sprinkled with water: A quart of a strong decoction of *Selladine* helps it also.

The Cure.



CHAP. XXIII.

Of the sickness of the Spleen.

THE spleen which is the vessel of melancholly; when it is over-charged therewith grows painfull, hard and great, in such sort, that sometimes it is visible. The signs to know it, is much groaning, hasty feeding, and a continual looking to his left side only. The cure is *Agrimour*; and boyl a good quantity of it in the water, which the horse shall drinke; and chopping the

The Cure.

the leaves small; mixe them very well with *sweet Ma. butter*, and give the horse two or three good round balls thereof, in the manner of pills.

CHAP. XXIV.

Of the Drop sic or evill habit of the body.

The Cure.

THe Drop sic is that evill habit of the body, which ingendred by surfeits and unreasonable labour, altereth the colours and complexions of horses, and changeth the hair in such an unnaturall sort, that a man shall not know the beast, with which he hath been most familiar. The cure is, to take a handfull or two of *Wormwood*, and boyling it in Ale or Beer, a quart or better, give it the horse to drink luke warme, morning and evening, and let him only drink his water at noon time of the day.

CHAP. XXV.

Of the Collicke, Belly-ake, and Belly bound.

The Cure.

THe Chollicke or Belly-ake is a fretting, gnawing, or swelling of the belly; or great bag, proceeding from windy humours, or from eating of green corn, or pulse, hot grains without salt or labour, or bread drow bak'r; and belly bound, is when a horse cannot dung. The cure of the Chollick or belly ake, is, to take good store of the hearb *Dill*, and boyl in the water you give your horse to drink: but if he cannot dung, then you shall boyl in his water good store of the hearb called *Fennegreek*, and it will make him loose without danger or hurting.

CHAP. XXVI.

Of the Laxe or bloody-Flix.

The Cure.

THe Laxe or Bloody-flix, is an unnaturall loosenesse in a horses body, which not being stayed, will for want of other excrement, make a horse void blood onely. The cure is, take a handfull of the hearb *Shepherd's purje*, and boyl it in a quart of strong Ale, and when it is luke-warme, take the seeds of the hearb *Woodrose* stamp, and put it therein, and give it the horse to drink.

CHAP.

CHAP. XXVII.

Of the falling of the Fundament.

THis cometh through nilllike and weaknesse; and the cure is: Take *Town-cresses*, and having dryed them to powder, with your hand put up the fundament, and then throw the powder thereon; after it, lay a little honey thereon, and then strow more of the powder, mixt with the powder of *Comin*, and it helpeth. The Cure.

CHAP. XXVIII.

Of Bots and Worms of all sorts.

THe Bots and gnawing of Worms. is a grievous pain, and the signes to know them, is the horses oft beating his belly and tumbling and wallowing on the ground, with much desire to lye on his back. The cure is, take the leaves chopt of the hearb *Sage*, and mixe it with Honey and Butter, and make two or three balls thereof, make the horse swallow them down, and it will help him. The Cure.

CHAP. XXIX.

Of the pain in the Kidneys, pain-piss, or the Stone.

ALL these diseases spring from one ground which is only Aggravell and hard matter gathered together in the Kidneys, and so stopping the conduits of Urine: the signs are only that the horse will often strain to piss, but cannot. The cure is to take *Maren-bair*, and steep it all night in a quart of strong ale, and give it the horse to drink every morning till he be well. this will break any stone whatsoever in a horse. The Cure.

CHAP. XXX.

Of the Stranguilian.

THis is a sorenesse in the horses yard, and a hot burning smarting when he pisseth: the signs are, he will piss oft, yet but a drop or two at once. The cure is, to boyl in the water which he drinketh, good store of the hearb *Maych*, or *Hogges fennel*, and it will cure him. The Cure.

CHAP. XXXI.

Of pissing blood.

The Cure.

THis commeth with over-travelling a horse, or travelling a Horse sore in the winter when he goeth to grasse. The Cure is, take *Aristolochia longa*, a handfull; and boyl it in a quart of ale, and give it the horse to drink luke-warm, and give him also rest.

CHAP. XXXII.

Of the Colic-evill, maulering of the yard, falling of the yard, shedding the seed

The Cure.

ALL these evils proceed from much lust in a horse; and the cure is, the powder of the hearb *Avi*, and the leaves of *Butony*; stamp them with white wine, to a moyst salve and annoynt the sore therewith, and it will heal all imperfection in the yard: but if the horse shed his seed, then beat Venice Turpentine and Sugar together, and give him every morning a good round ball thereof, untill the flux stay.

CHAP. XXXIII.

Of the particular diseases in Mares, barrenesse, consumption, rage of love, casting Foals, barrenesse to foal, and how to make a Mare cast her Foal.

IF you'l have your Mare barren, let good store of the hearb *Agnus castus* be boyled in the water she drinketh: if you would have her fruitful, then boyl good store of *Mother-wort* in the water which she drinketh: If she loose her belly, which sheweth a consumption of the womb, you shall then give her a quart of Brine to drink, *Mugwort* being boyled therein. If your Mare through pride of keeping grow into extream lust, so that she will neglect her food, through the violence of her fleshy appetite, as it is often seen amongst them, you shall house her for two or three dayes, and give her every morning a ball of Butter and *Agnus Castus* chopt together, if you would have a Mare to cast a Foal, take a handfull of *Detony*; and boyl it in a quart of ale, and it will deliver her presently. If she cannot Foale, take the hearb *Horsimint*, and either dry it or stamp it, and take the powder

der or the joyce, and mixe it with strong ale; and give it the Mare and it will help her: If your Mare from former bruilings or strokes be apt to cast her Foals, as many are, you shall keep her at grasse very warme, and once in a week, give her good warme malth of drink: this secretly knitteth beyond expectation.

CHAP. XXXIV.

Of drinking venome, as Horse-leaches, Hens dung, or such like

IF your Horse have drunk Horse-leaches, hens dung, feathers, or such like venomous thing, which you shall know by his panting, swelling, or scouring, you shall take the hearb *Semibitula*, and drying it, beat it into powder, and put three spoonfulls thereof into a quart of ale, and give it the horse to drink.

CHAP. XXXV.

Of Suppositaries, Glysters, and Purgations.

IF your horse by sicknesse, strict dyet, or too vehement travel grow dry and costive in his body as it is ordinary, the easiest means in extreameity to help him, is to give him a suppositary: the best of which is, to take a candle of four in the pound, and cut off five inches at the bigger end, and thrusting it up a good way with your hand into his fundament, presently clap downe his tayle, and hold it hard to his tuell, a quarter of an hour, or half an hour: and then give him leave to dung: but if this be not strong enough; then you shall give him a Glyster, and that is take four handfulls of the hearb *Anise*, and boyl it in a pottle of running water, till halfe be consumed, then take the decoction, and mixe it with a pint of Sallet-oyle: and a pretty quantity of salt, and with a glyster-pipe give it, at his tuell. But if this be too weak, then give him a purgation thus: Take twenty Raisins of the Sun without stones, and ten Figs slit, boyl them in a pottle of running water till it come to a jelly; then mixe it with the powder of Lycoras, Anniseeds, and Sugar-candy till it be like paste; then make it into round balls; and role it in sweet butter, and so give it the horse, to the quantity of three hen eggs.

The Cure.

CHAP. XXXVI.

Of Needles and Frictions.

THere be other two excellent helps for sick horses; as Frictions and Needlings: the first to comfort the outward parts of the body, when the vitall powers are astonished: the other to purge the head when it is stop't with phlegme, cold or other thick humors. And of Frictions, the best is vinegar and Patch-grease melted together, and very hot chased into the horses body against the hair. And to make a horse neefe, there is nothing better, than to take a bunch of Pellitory of Spain, and binding it unto a stick, thrust it up a horses nostrils, and it will make him neefe without hurt or violence.

CHAP. XXXVII

Of diseases in the eyes: as watry eyes, blood-shotten eyes, dim eyes, moon eyes, stroke in the eye, wart in the eye, inflammation in the eye, Pearl, Pin, Web, or Haw.

The Cure.

UNto the eye belongeth many diseases, all which have their true signs in their names, and as touching that which is watry, blood-shotten, dim, moon, stricken or inflamed, they have all one cure. The cure is, take Wormwood, and beat it in a Morter with the gall of a Bull, strain it, and annoynt the horses eyes therewith, and it is an approved remedy. But for the Wart, Pearl, or Pin or Web, which are evils grown in, and upon the eye to take them off, take the iuyce of the herb Betin, and wash his eyes therewith, and it will wear the spots away. For the Haw every Smith can cut it out.

CHAP. XXXVIII.

Of the Imp Beume in the ear, Pole-evill, Fistula, swelling after blood-curing, any gald back, canker in the Withers fistula, Went, Navel galls, or any hollow Ulcer.

THESE diseases are so apparent and common, that they need not further description but their names, and the most certain cure is to take clay of a mud, or lime wall, without lime, the same and all, and boyling it in strong vinegar, apply it playster

wife

wife to the fore, and it will of its own nature searh to the bottom, and heal it provided, that if you see any dead or proud flesh arise, that then you either eat or cut it away.

CHAP. XXXIX.

Of the Vives.

FOr the Vives, which is an inflammation of the kirkels between the chaps and the neck of the horse; take Pepper one penny-worth, of *Swins grease* one spoonfull the juyce of a handfull of Rew, Vinegar two spoonfulls, mixe them together and then put it equally into both the horses eares, and then tye them up with two flat laces, then shake the eares, that the medicine may go down, which done, let the horse blood in the neck, and in the temple veins, and it is a certain cure.

CHAP. XL.

Of the strangle, or any boyl, borch or other Impostume whatsoever.

ALL these diseases are of one nature, being onely hard Byles or impostumes gathered together by evill humours, either between the chaps, or else where on the body. The cure is, take *Suthernwood*, and dry it to powder, and with Barley meal and the yolk of an Egge make it into a salve, and lay it to the Impostume and it will ripen it, break it, and heal it. The Cure.

CHAP. XLI.

Of the Canker in the Nose, or any other part of the body.

TO heal any Canker in what part soever it be: Take the juyce of *Plantain*, as much *Vnegar*, and the same weight of the powder of *Alum*; and with it annoynt the sore twice or thrice a day, and it will kill it and cure it.

CHAP. XLII.

Of flanching of blood, whether it be at the Nose, or proceed from any wound.

IF your Horse bleed violently at the nose, and will not be staid, then you shall take *Bittern*, and stamp it in a mortar with bay-salt, or other white Salt, and stop it into the horses nose, or apply

ply it to the wound, and it will stanch it but if you be suddenly taken ; as riding by the high way or otherwise, and cannot get this hearb, you shall take any woollen cloath, or any felt hat, and with a Knife scrape a fine Lint from it, and apply it to the bleeding place, and it will stanch it presently.

CHAP. XLIII.

Of the diseases in the mouth, as bloody Rists, Ligs, Lampas, Camery, Inflammation, Tongue-hurt, or the Barbs.

The Cure.

IF you find any infirmity in your horses mouth, as the bloody rists, which are chaps or rifts in the palate of the horses mouth, the ligs, which are little pustels or bladders within the horses lips: the Lampas, which is an excrescion of flesh above the teeth ; the Camery, which is little warts in the roof of the mouth : inflammations, which is blisters : barbs, which are two little paps under the tongue, or any hurt on the tongue by bit or otherwise, you shall take the leaves of wormwood, and the leaves of *Shrivert*, and beat them in a mortar with a little hony, and with it annoynt the sores, and it will heale them : as for the Lampas, they must be burnt away, which the ignorant st Smith can easily do.

CHAP. XLIV.

Of pain in the teeth, or loose teeth.

FOr any pain in the teeth, take Buttony and teeth it in Ale or Vinegar till a half part be consumed, and wash all the gums therewith: but if they be loose, then only rub them with the leaves of *Elecamp* or *Forseshelm* after they have been let blood, and it will fasten them.

CHAP. XLV.

Of the Crick in the neck.

FOr the Crick in the neck, you shall first chase it with the Friction before specified and then annoynt and bath it with sope and vinegar, boyled together.

CHAP.

CHAP. XLVI.

Of the falling in the Creſt, mangineſſe of the Main, or, ſludding of the hair.

ALL theſe diſeaſes proceed from poverty, milke, or over-riding; and the beſt cure of the falling of the Creſt, is bloud-letting, and proud keeping, with ſtore of meat; for ſtrength and fatneſſe ever will raiſe up the Creſt, but if the main be maingy, you ſhall annoynt it with butter, and Brimſtone, and if the haire fall away, then take Southernwood, and burn it to aſhes, then take thoſe aſhes, and mixing them with common-oyle, annoynt the place therewith, and it will bring hair preſently, ſmooth, thick, and fair.

CHAP. XLVII.

Of pain in the Withers.

A Horſes Withers are ſubject to many griefs and ſwellings which proceed from cold humours, ſometimes from evil ſaddles, therefore if at any time you ſee any ſwelling about them you ſhall take the herb Hearts-tongue, and boyl it with the oyl of Roſes, and very hot apply it to the ſore, and it will allwaie it, or elſe break it and heal it.

CHAP. XLVIII.

Of ſwaying the back, or weakneſſe in the back.

THeſe two infirmities are dangerous, and may be eaſed, but never abſolutely cured: therefore where you find them, take Colewort and boyl them in oyl, and mixing them with a little bean meal charge the back, and it will ſtrengthen it.

CHAP. XLIX.

Of Itch in the ſayl, or of the generall Scab and mangineſſe, or of the Farcy.

FOr any of theſe diſeaſes, take freſh greaſe, and yellow Arſnick mixe them together, and where the Mangineſſe or Itch is, there rub it hard in, the ſore being made raw: But if it be for Farcy then with a Knife ſlit all the Knots, both hard & ſoft, & then rub in the medicine: which done, tye up the horſe, ſo as he

may not come to bite himself, and then after he hath stood two or three hours, take old pisse and salt boyld together, provided alwayes that you first let him bloud, and take good store from him, and also give him every morning a strong scouring, or a strong purge, both which are shewed before.

CHAP. XL.

*Of any halting which cometh by strain, or strack
either before or behind from the shoulders
or hippe, down to the hoof.*

THere be many infirmities which make a horse halt, as pinching the shoulder, wrench in the shoulder, wrench in the nether joynt, splatting the shoulder, shoulder pight, strains in the joynts, and such like, all which since they happen by one accident, as namely, by the violence of some slip or strain, they may be cured by one medicine, and it is thus. After you have found where the grief is, as you may do by griping and pinching every severall member, then where he most complaineth, there is his most grief. You shall take (if the strain be new) Vinegar, Bole-armonlack, the whites of Eggs, and bean flowre, and having beaten them to a perfect salve, lay them very hot to the sore place, and it will cure it, but if the strain be old, then take Vinegar and butter, and melting them together with wheat bran, make it into a pultis, and lay it to the sore as hot as may be, and it will without doubt take away the grief.

CHAP. LI.

Of foundring in the feet.

OF foundring there be two sorts; a dry and a wet: the dry foundring is incurable, the wet is thus to be helpt. First, pare all the soles of his feet so thin, that you may see the quick, then let him bloud at every toe, and let them bleed well, then stop the vein with tallow, and Rosen, and having tacked hollow shoes on his feet, stop them with Bran, Tarre, and Tallow, as boyling hot as may be, and renew it once in two dayes; for a week together, then exercise him much, and his feet will come to their true use and nimbleness.

CHAP. LII.

Of the Splent, Curb, Bide-spaven, or any knobby or bony excreffion or Ring-bone.

A Splent is a bony excreffion under the Knee or the fore-legge, the Curb is the like behind the hinder hough, the Spaven is the like on the inside of the hinder hough, and the Ring-bone is the like on the coronet of the hoof. And the cure is, first upon the top of the excreffion, make a slit with your knife the length of a Barly-corn, or a little more, and then with a fine cornet raise the skin from the bone, and having made it hollow, the compass of the excreffion, and no more; take a little lint, and dip it into the oyl of *Origanum*, and thrust it into the hole and cover the knob, and so let it bridle till you see it rot, and that nature casteth out both the medicine and the core. As for the Ring-bone you shall need to scarifie and annoynt it with the oyl onely.

CHAP. LIII.

Of the Malander, Selander, Pain-scratches, Medlet, Mules, Crown-scabs, and such like.

FOR any of these Sorances, you shall take Verdigrease and soft grease, and grinding them together to an Oyntment, put it in a Box by it self then take Wax, hogges-grease, and Turpentine. of each alike, and being melted together, put that salve into another Box: then when you come to dress the sore, after you have taken off the scab and made it raw, you shall annoynt it with your green salve of *Verdigrease*, and fresh grease onely for two or three dayes; it is a sharp salve, and will kill the cankerous humor: then when you see the sore look fair, you shall take two parts of the yellow salve, and one part of the green salve, and mixing them together, annoynt the sore therewith till it be whole making it stronger or weaker as you shall find occasion.

CHAP. LIV.

Of an upper Attaint, or nether Attaint, or any sore by over-reaching.

THese attaints or strokes or cuts by over-reaching either on the

the back finew of the fore-legge, on the heels or neither joynts and may be safely healed by the same former medicine and mean which healeth the Malander or Selander, in the former chapter: only for your over-reaches, you shall before you apply your salve lay the fore plain and open, without hollownesse, and wash it with beer and salt, or vinegar and salt.

CHAP. LV.

Of the infirmities of hoofs, as false quarters, loose hoofs, casting hoofs, hoof bound, hoof running, hoof brittle, hoof hurt, hoof soft, hoof hard, or generally to preserve hoofs.

THe hoof is subject to many infirmities: as first to false quarters, which commeth by pricking, and must be helpt by good shoeing, where the shooe must bear on every part of the foot, but upon the false quarters only. If the hoof be loose, annoynt it with pitch of *Burgundy*, and it will knit it: if it be clean cast off, then pitch of *Burgundy* and tallow molten together, will bring a new; if it be bound or strained, it must be very well opened at the heels, the soal kept moyst, and the coronet annoynted with the fat of Bacon and Tar. If the frush of the feet run with stinking matter, it must be stoppt with Soot, Turpentine, and Bolcarmoniack mixt together: if it be brittle or broken, then annoynt it with pitch and Linseed Oyle, molten to a soft salve; if it be soft then stop it with Sope, and the ashes of a burnt Felt mixt together; if the hoofs be hard, lay hot burning cinders upon them, and then stop them with tow and tallow: and generally for the preserving of all good hoofs, annoynt them dayly with the swaine or rind of fat Bacon.

CHAP. LVI.

Of the blood-spawne, or hough-bony, or any other unnatural swelling, from what cause soever it proceedeth.

THese two sorances, or pastels, or soft round swellings, the first on the inside of the hinder hough, and the other on the very huckle on the hough-behind, they are soft and very sore, and the cure is: first to take up the vein above, and let it bleed only from

from below, then having knit it fast with two shoo-makers ends on both sides the flit, cut the vein in two pieces : then take Linseed and bruise it in a mortar, then mixe it with Cow-dung and heat it in a frying pan; and so apply it to the swelling only, and if it break and run, then heal it with a playster of pitch, and the horse shall never be troubled with Spaven more : but if the swelling come by strain or bruise, then take pitch-grease, and molting it, annoynt the sore therewith; holding a hot Iron neare it to sink in the grease, then fold a linnen cloath about it, and it will asswage all swellings whatsoever.

CHAP. LVII.

Of Wind-galls.

THese are little blebs, or soft swellings on each side the Fetlock, procured by much travell on hard and stony wayes. The cure is to prick them and to let out the Jelly, and then dry up the sore with a playster of pitch. The Cure.

CHAP. LVIII.

Of enterfairing or Shackle-gall, or any gallings.

ENterfairing is hewing one legge on another, and striking off the skinne, it proceedeth from weaknesse or straitnesse of the horses pace; and Shackle gall is any gall underneath the Fetlock. The cure is, to annoynt them with Turpentine and Verdigrease mixt together, or Turpentine alone, if it rankle not too much. The Cure.

CHAP. LIX.

Hurts in the Cronet, as the Quitter-bone, or Matlong.

THe Quitterbone is a hollow ulcer on the top of the cronet, and so is the Matlong, and the cure is : First to taint it with Verdigrease untill you have eaten out the core, and made the wound very clean; then you shall heal it up with the same salves that you heal the Scratches. The Cure.

CHAP.

CHAP. LX.

*Of wounds in the foot, as gravelling, pricking, figge,
retait or cloying.*

IF your horse have any wound in his foot, by what mischance soever, you shall first search it, and see that it be clear of any nayle, poynt, or other splint to annoy it, then wash it very well with white Wine and Salt, and after taint it with the Oyntment called *Egyptiacum*, and then lay hot upon the taint with *Flax-hurds*, *Turpentine*, *Oyl* and *Wax* mingled together, and annoynt all the top of the hoof and coronet with *Bale armoniack* and *Vinegar*: do this once a day untill the sore be whole,

CHAP. LXI.

To draw out a Stub, or Thorn.

TAKE the hearb *Dettony*, and bruise it in a mortar with *Black-soap*, and lay it to the sore, and it will draw out the splent, iron, thorn, or stub.

CHAP. LXII.

Of the Aubury, or Tetter.

The Cure.

THE *Aubury* is a bloody wart on any part of the horses body and the *Tetter* is a Cankerous ulcer like it: The cure of both is with a hot iron to sear the one plain to the body, and to scarifie the other; then take the juyce of *Plantaine*, and mixe it with *Vinegar*, *Hony*, and the powder of *Allome*, and with it annoynt the Sore till it be whole.

CHAP. LXIII.

Of the Cords or String-halt.

THIS is an unnaturall bending of the sinews; which imperfection, a horse bringeth into the world with him: and therefore it is certaine it is incurable, and not painfull, but only an eye sore, yet the best way to keep it from worse inconvenience, is to bath his limbs in the decoction of *Colcworths*.

CHAP.

CHAP. LXIV.

Of spur-galling, or fretting the skin, and hair.

FOr this there is nothing better then pills and salt, with which wash the fore dayly.

CHAP. LXV.

Of healing any old sore or wound.

Fresh butter, and the hearb *Ameos*, chopt and beaten together to a salve will heal any wound, or any old sore.

CHAP. LXVI.

Of sinews being cut.

IF the horses sinews be cut, take the leaves of wild *Nep* or *Woodbine*, and beating them in a mortar with *May butter*, apply it to the sore, and it will knit the sinews.

CHAP. LXVII.

Of eating away any dead flesh.

TAke *Sinbwort*; and lap it in a red dock leaf, and roast it in the hot cinders, and lay it to the sore, and it will eat away any dead flesh. So will *Verdigrease*, burnt allom, or lime. The Cure.

CHAP. LXVIII.

Of Knots in the joynts.

Patch-grease applyed as is before shewed for swellings, will take away any hard Knots in the flesh, or upon the sinewes.

CHAP. LXIX.

Of venomous wounds, as biting with a mal Dog, cusk of Bores, Se-penis or such like.

FOr any of these mortall or venomous wounds, take *Tarrow*, *Calamint*, and the grains of *Wheat*, and beat them in a mortar with water of *Sothernwood*, and make it into a salve, and lay it to the sore, and it will heal it safely.

CHAP. LXX.

Of Lacerations.

THIS sickness of *Vermine* is bred in a horse through unnatural dislike and poverty: the cure is, take the juyce of *Beere* and

and *Scabious*, beaten together, and with it annoynt the Horses Body over, and it will make him clean.

CHAP. LXXI.

Of defending a Horse from flies.

TAKE the jayce of Pellitory of Spain; and mixing it with milke annoynt the Horses belly therewith, and no flies will trouble him.

CHAP. LXXII.

Of broken bones, or bones out of jaynt.

AFter you have placed the bones in their true places, take the Ferofmund, and beat it in a mortar with the oyle of Swallows, and annoynt all the members; then splent it and role it up, and in fifteen dayes the bones will knit and be strong.

CHAP. LXXIII.

Of drying up sores when they be a most whole.

ALlome burnt, unslackt Lime, the ashes of an old shoes-sole burnt, or Oyster-shells burnt; any of these simply by themselves, will dry up any sore, though never so moyst.

CHAP. LXXIV.

A most famous Receit to make a Horse that is lean, and full of inward sicknesse, found and said in fourteen dayes having been often approved of.

TAKE of wheat meale six pound, Amiseeds two pounces, Commin seeds six drammes, Carthamus one dramme and a half, Fenegreek seeds one ounce two drammes, Brimstone one ounce and a half, Sallet oyl one pint, Honey one pound and a half, white Wine four pints, this must be made into paste, the hard simples being powdered into powder, and finely searst, and then kneaded together, and so made into balls as big as a mans fist, then every watering consume one of those balls into his cold water which he drinketh for morning and evening for fifteen dayes together, and if at the first he be dainty to drink the water yet care not, but let him fast till he drink it, and after he begins to take it, he will drink it with great greediness.

CHAP.

CHAP. LXXV.

How to make a white Starre.

SLit the Horses fore-head the length of your Starre, and then Scraife the skin up with a cronet, and put in a plate of Lead as bigge as the Starre, and let it remain 6 or two or three dayes together; and then let it out and presse down the skin with your hand, that hair will fall away, and white will come in the place: or to scald the face or skinne with a tower Apple roasted, will bring white haire: But to make a black Star, or a red Star in a Horses fore-head, I refer it for you to look and approve of my *Master-piece*, which belongeth onely to that for to be exactly discoursed of, that being onely a generall cure of all Cattell.

The end of the Horse.

The generall Cure and Ordering of the Bull, Cow,
Calf, or Oxe.

CHAP. I.

*Of the Bull, Cow, Calf, or Oxe, their shape and breed,
use, choice, and preservation.*



Or as much, the Male of all Creatures are the principal in the breed and generation of things, and that the fruit which issueth from their Seed participateth most with their outward shapes, and inward qualities, I think fittest in this place, where I intend to treat of Horned Cattell and Neat, to speak first of the choice of a fair Bull, being the breeders principallest instrument of profit. You shall understand then, that of our English Cattell, (for I will not speak of those in *Italy*, and other *Erraine* Countreies, as other Aothors do, and forget mine own) the best are bred in *Yorke-shire*, *Darby-shire*, *Linca-shire*, *Stafford-shire*, *Lincoln-shire*, *Glocester-shire*, and *Somer-set-shire*.

The Country
for breed.

shire, though they were bred in *York-shire*, *Darby-shire*, *Lancashire*, and *Stafford-shire*, are generally all black of colour, and though they whose blackness is purest, and their hairs like velvet, are esteemed best; they have exceeding large horns, and very white with black tips; they are of stately shape, big, round, and well huddled together in every member, short joyned, and most comely to the eye, so that they are esteemed excellent in the Market: those in *Lincoln-shire* are for the most part Pide, with more white then the other colours, their horns little and crooked, of bodies exceeding tall, long, and large, lean and thin elighed, strong hooved, not apt to surbait, and are indeed fittest to labour and draught. Those in *Somerset-shire*; and *Glocester-shire*, are generally of a blood red colour, in all shapes like unto those in *Lincoln-shire*, and fittest for their uses. Now to mix: a race of these and the black ones together is not good, for their shapes and colours are so contrary, that their issues are very uncomely: therefore, I would wish all men to make their breeds, either simply from one and the same kind, or else to mixe *York-shire*, with *Stafford-shire*, with *Lancashire*, or *Darby-shire*, with one of the black races, and so likewise *Lincoln-shire*, with *Somerset-shire*, or *Somerset-shire* with *Glocester-shire*.

Of not mixing
and mixing of
races.

The shape of
the Bull.

Now for the shapes of your Bull; he would be of a sharp and quick countenance, his horns the larger the better, his neck fleshy, his belly long and large, his forehead broad and curled, his eyes black and large, his ears rough within, and hair like velvet, his muzzell large and broad at the upper lip; but narrow and small at the neather, his nostrils crooked within, yet wide and open, his dew-lap extending from his neather lip down to his foreboots, large side, thin and hairy, his breast rough and big, his shoulders large, broad, and deep; his ribs broad and wide, his back straight and flat, even to the setting on of his tayle, which would stand high, his huckle bones round and fair appearing, making his buttocks square, his thighs round, his legs strait and short joyned, his Knees round and big, his hooves or claws long and hallow, his tayl long and bush-haired, his pill: round and also well haite. These Bulls as they are for breed, so they are excellently good for the draught, only they naturally draw better single, like horses, then in the yoke, like Oxen: the reason as I suppose being, because they can hardly be matcht in an equal manner.

The use of the
Bull.

Now for the Cow, you shall chuse her of the same Country Of the Cow with your Bull, and as near as may be of one colour, onely her and her shape. bag or udder would ever be white, with four teats and no more, her belly would be round and large, her forehead broad and smooth, and all other parts such as are before shewed in the male kind.

The use of the Cow is two-fold, either for the Dairy or for Of her use. breed: the Red Cow giveth the best milk, and the black Cow bringeth forth the goodliest Calf. The young Cow is the best for breed, yet the indifferent, old are not to be refused. That Cow which giveth milk longest is best for both purposes, for she which giveth milk long, dry, loseth halfe her profit, and is lesse fit for teeming: for commonly they are subject to feed, and that straineth the Womb or Matrix.

Now for calves: there are two wayes of breeding them, the one to let them run with their Dams all the year, which is best Of Calves, and maketh the goodliest beast: the other to take them from and their nourishing. their Dams, after their first sucking, and so bring them up upon the finger, with floten milk, the cold only being taken away and no more; for to give a young Calf hot milk, is present death, or very dangerous. If your Calf be calved in the five dayes after the change; which is called the *Prime*, do not rear it, for most assuredly it will have the Sturdy, therefore preserve it only for the Butcher; also when you preserve those male Calves, which shall be Bulls, then geld the rest for Oxen, and the younger they are gelt Observations. the better: the best time for rearing of Calves is from *Michaelmas* till *Candlemas*. A Calf would be nourished with milk twelve weeks, onely a fortnight before you wean it from milk, let the milk be mixt with water. After your Calf hath drunk one moneth, you shall take the finest, sweetest, and softest hay you can get, and putting little wisps into cloven sticks, place them so as the Calf may come to them and learn to eat Hay. After our Ladies day, when the weather is faire, you may turn your Calves to grasse, but by no means let it be ranke, but short and sweet, so that he may get it with some labour.

Now of the Oxe: you shall understand that the larger are the Of the Oxe best and most profitable, both for draught or feeding, for he is the and his use. strongest to indure labour, and best able to containe both flesh and

and tallow. Now for his shape it differeth nothing from that of the Bull. only his face would be smooth, and his belly deeper. That Oxe is fittest for the yoke which is of gentle nature, and most familiar with the Man. In matching your Oxen for the yoke, let them as near as may be, be of one height, spirit and strength, for the stronger will ever wrong the weaker, and the duller will injure him that is of freer spirit, except the driver be carefull to keep the dull Oxe to his labour. Oxen for the yoke would by no means be put beyond their ordinary pace: for violence in travell heats them, heat breeds surfeits, and surfeits those diseases which makes them unapt to feed, or for any other use of goodnesse. Your Oxe for the yoke will labour well with Barly straw, or Pease straw, and for blend fodder, which is Hay and Straw mixed together, he will desire no better feeding.

O this food
for labour.

Oxen to feed
for the Butcher.

Now for your Oxe to feed, hee would as much as might be, be ever of lusty and young years, or if old, yet healthfull and bruised, which you shall know by a good taile, and a good pyzell, for if the hair of one or both be lost, then he is a waster, and he will be long in feeding. If you do see the Oxe doth lick himself all over, it is a good sign that he is marketable and well fed, for it shews soundnesse, and that the beast taketh a joy in himself: yet whilst he doth so lick himself he feedeth not, for his own pride hindreth him, and therefore the Husbandman will lay the Oxes own dung upon his hide, which will make him leave licking and fall to his food. Now if you go to chuse a fat beast you shal handle his hindmost rib, and if it be soft and loose, like down, then it shews the Oxa is outwardly well fed so doth soft huckle-bones, and a big natch round and knotty: if his cod be big and full, it shews he is well tallowd, and so doth the crop behind the shoulders: if it be a Cow, then handle her navel, and if that be big, round, and soft, surely she is well tallowed. Many other observations there are, but they be so well known, and common in every mans use, that they need no curious demonstration.

To preserve
Cattell in
health,

Now for the preservation of these Cattell in good and perfect health, it shall be meet that for the young and lusty, and indeed generally for all sorts, except Calves. to let them blood twice in the year, namely the Spring and Fall, the Moon being in any of the

the lower signs, and also to give them to drink of the pickle of *Olives*, mixed with a head of *Garlick* bruited therein; and for your Calves, be only careful that they go not too soon to grasse, and small danger is to be feared. Now notwithstanding all a mans carefulnesse, Beasts dayly doe get infirmities; and often fall into mortall extremities: peruse therefore these Chapters following, and you shall find cure for every particular disease.

CHAP. II.

Of the Fever in Cattell.

Cattell are most subject unto a Fever, and it cometh either from surfeit of blood, being raw, and musty, or from flux of cold humours ingendred by old keeping: the signs are trembling, heavy eyes, a foaming mouth, and much groaning: and the cure it, you shall let him blood, and then give him to drink a quart of Ale, in which is boyled three or four roots of *Plantaine*, and two spoonfulls of the best *London Treacle*, and let his Hay be sprinkled with water. The Cure.

CHAP. III.

Of any inward sicknesse in Cattell.

For any inward sicknesse or drooping in Cattell, take a quart of strong Ale, and boyl it with a handful of *Wormwood*, and half a handful of *Rew*; then strain it, and adde to it two spoonfulls of the juyce of *Garlicke*, and as much of the juyce of *Houfeleek*, and as much *London Treacle*, and give it the beast to drink, being no more but luke-warm.

CHAP. IV.

Of the Disease in the head, as the Sturdy, or Turning-evil.

This disease of the Sturdy is known by a continuall turning about of the Beast in one place; and the cure is to cast the Beast, and having made his feet fast, to slit the upper part of his forehead crosse-wise, about four inches each way, then turning up the skin, and laying the skull bare, cut a piece out of the skull two inches square, or more: then look; and next unto the panicle of the brain, you shall see a bladder lye full of water and blood, which The Cure.

which you shall very gently take out, and throw away; then anoint the place with warm fresh butter, turn down the skin, and with a needle and a little Red silke, stitch it close together; then lay on a hot playster of Oyle, Turpentine, Wax, and a little Rozen melted together with Flax-hurds; and so folding warm woollen cloath about the head, let the beast rise, and so remain three or four dayes ere you dresse it again, and then heal it up like another wound, only observe in this cure, by no means touch the brain, for that is mortall, and then the help is both common, and most easie.

CHAP. V.

Of Diseases in the eyes of Cattell, as the Haw, a Stroak, Inflammation, Weeping, or the Pinne or Webbe.

FOr any generall soreness in the eyes of Cattell, take the water of *Eye-bright*, mixt with the juyce of *House-lecke*, & wash them therewith, and it will recover them: but if a Haw breed therein, then you shall cut it out, which every simple Smith can do. But for a Stroak, Inflammation, Pin or Web, which breeds excreffions upon the eyes, take a new laid Egge, and put out half the white; then fill it up with Salt, and a little Ginger, and roste it extream hard in hot Cinders: which done, beat it to powder shell and all; but before you roast it, wrap it in a wet cloath, and put of this powder into the beasts eye, and it will heal and cure it.

CHAP. VI.

Of diseases in the mouth, as barbs under the tongue, blain on the tongue, teeth-loose, or tongue venomd.

THose Barbs, or paps which grow under the tongues of Cattell, and being inflamed do hinder them from feeding, you shall with a keen pair of sheers cut away close by the flesh, and if they bleed much, (as they will do if they be rank) you shall then with a hot red bodkin scare them, and drop on the top of the scared places a drop or two of Rozen and butter mixt together; but if they bleed not, then onely rub them with Sage and Salt, and they will heal. Now for the Blain on the tongue, of some called the Tin-blain, it is a blister which groweth at the roots

roots of the tongue, and comnieth through heat of the stomack and much chafing, and is oft very mortall, for it will rise so suddenly and so big that it will stop the wind of the Beast. The Cure is, to thrust your hand into the mouth of the beast, and drawing out his tongue, with your nayl to break the blister, and then to wash the sore place with strong brine, or Sage, Salt, and water: if you find more blisters then one, break them all, and wash them, and it is a present cure. Now for loose teeth, you shall let the beast blood in his gums, and under his tayle, then wash his chaps with Sage, and woodbine leaves, boyld in brine: lastly, if the tongue be venom'd, which you shall know by the unnatural swelling thereof, you shall take Plantain, and boiling it with Vinegar and Salt, wash the tongue therewith, and it will cure it. The Cure.

CHAP. VII.

Of diseases in the neck, as being galled, bruised, swolne, out of joynt or having the Clow.

IF any Oxes neck be galled, bruised, or swoln with the yoke; take the leaves of round *Aristolochia*, and beating them in a Morter with tallow, or fresh grease, annoint the sore place therewith, and it will not only heal it, but any strain in the neck, even if the bone be a little disordered. Now for the *Clow* or *Clowse* which causeth a Beast to pill and loose the hair from his neck, and is bred by drawing in wet and rainy weather: you shall take the ashes of an old burnt shoe, and strew it upon the neck, and then rub it over with Tallow and Turpentine mixt together.

CHAP. VIII.

Of the Pestilence, Gaggill, or Murrain in Beasts.

THIS Pestilence or Murrain amongst Beasts is bred by divers occasions; as from ranknesse of blood, or feeding from corruption of the ayr, intemperatenesse of the weather, inundation of floods, or the infection of other Cattell: much might be said of the violence and mortality thereof, which hath utterly unfurnished whole Countries: but to go to the cure, you shall give to all your Cattell, as well the sound as sick, this medicine which never faileth to preserve as many as have taken it: take of old Urine a quart, and mixe it with a handfull of Hens dung dissolved therein, and let your beast drink it. The Cure.

CHAP.

CHAP. IX.

Of the mistaking, or leanness of Beasts.

IF your Beast fall into any unnaturall mislike or leanness: which you shall know by the discolouring of his hair; you shall then cause him first to be let blood, and after take sweet butter, and beat it in a mortar with a little *Morb*, and the shaving of *Ivory*, and being kept fasting, make him swallow down two or three balls thereof; and if it be in the Winter feed him with sweet Hay; if in the Summer, put him to graze.

CHAP. X.

Of the disease in the liver, as Flux, Costiveness, Cholick, and such like.

IF your Beast be troubled with any sore fluxe, or bloody flux, you shall take a handfull of the seeds of *Mara-resa*, and being dried and beaten to powder, brew it with a quart of strong Ale and give it the Beast to drink. But if he be too dry or costive in his body, then you shall take a handfull of *Pennagreek*, and boyl it in a quart of Ale, and give him to drink; but for any cholick or belly-ake, or gnawing of the guts, boyl in the water which he drinketh good store of oyle, and it will help him.

CHAP. XI.

Of pissing of Blood.

IF your Beast pisse blood, which cometh either of over-labouring; or of hard and sower feeding, you shall take *Shephards-purse*, and boyl it in a quart of red wine, and then strain it, and put to it a little *Cinnamon*, and so give it the Beast to drink.

CHAP. XII.

Of dropping nostrils, or cold in the head.

IF your Beasts nostrils run continually, which is a sign of cold in the head, you shall take *Butter* and *Brimstone*, and mixing them together, annoint two *Goose-feathers* therewith, and thrust them up into the nostrils of the Beast, and use thus to doe every morning till they leave dropping.

CHAP. XIII.

Of any swelling in a Beast whatsoever.

IF your Beast have any outward swelling, bathe it with Oyl and Vinegar exceeding hot, and it will assuage it: but if the swelling be inward, then boyl round *Aristolochia* in his water.

CHAP. XIV.

Of the Worms in the Tayle.

THere is a Worm which will breed in the tayl of a Beast, and doth not onely keep him from feeding, but also eateth away the hair of the tayle and disfigureth the Beast. The cure is, to wash the tayle in strong *Lye* made of *Urine* and *Ash-wood-ashes* and The Cure. that will kill the Worm, and also heal and dry up the sore.

CHAP. XV.

Of any Cough, or shortnesse of breath in Cattell.

IF your Beast be troubled with the Cough, or shortnesse of breath you shall give him to drink divers mornings together a spoonfull or two of Tarr, dissolved in a quart of new milk, and a head of Garlick clean pill'd and bruised.

CHAP. XVI.

Of any Impostume, Fiste, or Borch in a Beast.

IF your Beast be troubled with any Impostume, Bile, or Borch, you shall take Lilly roots and boyl them in milk till they be soft, so that you may make them like pap: then being very hot clap them to the sore, and then when it comes to be soft, open it with a hot iron, and let out the filth, then heal it up with Tarr, Turpentine, and Oyl mixt together.

CHAP. XVII.

Of diseases in the Sinewes, as weaknesse, stiffenesse, or sorenesse.

IF you find by the unnimble going of your Beast, that his sinews are weak, shrunk or tender: Take *Mallows* and *Chickweed* and boyl them in the Dregs of Ale or in Vinegar, and being

M very

very hot, lay it to the offended member, and it will comfort the sinewes.

CHAP. XVIII.

*Of the general scab, particular scab, itch, or scurf
in Cattell.*

IF your Beast be troubled with some few scabs here and there on his body, you shall onely rub them off, and annoint the Place with black Sope and Tar, mixt together, and it will heal them. But if the Scab be universall over the body, and the scabs mixt with a dry scurf, then you shall first let the Beast bloud, after rub off the scabs and scurf till the skin bleed, then wash it with old urine and green Copperas together, and after the bathing is dry annoynt the body with Bores grease, and Brimstone mingled together.

CHAP. XIX.

Of the hide-bound, or dry skin in Cattell.

THIS grief cometh of over-much labour and evil keeping, and above all other Beasts your *Lincolshire* Oxen are subjeckt unto it, the signs are a discoloured and hard skin, with much leanness: the cure is, to let him bloud, and to give him to drink a quart of good strong Ale brewed with *Myrrhe*, and the powder of *Bayberries*, or for want of Berries the Bay-tree leaves; and then keep him warm and feed him with Hay that is a little Mow burnt, and onely looketh red, but is not dully or mouldy, for that will get him an appetite to drink, and drinking will loosen his skin.

CHAP. XX.

Of the diseases in the Lungs, especially the Lung grown.

THE Lungs of a Beast are much subject to sicknesse, as may appear by much panting, and shortnesse of breath, the signs being a continual coughing, but that which is before prescribed for the Cough, will cure all these, onely for a Beast which is Lung-grown, or hath his Lungs grown to his side, which cometh through some extream drought taken in the Summer season, and is known by the cough, hoarse, or hollow coughing; you shall take a pint of *Tanners* oze, and mix it with a pint of new milk,

and one ounce of brown Sugar Candy, and give it the Beatt to drink, this hath been found a present cure; or to give him a ball as big as a mans fist, of Tar and Butter mixt together, is a very certain cure.

CHAP. XXI.

Of biting with a Mad Dog, or any other venomous Beatt.

IF your Beatt be bitten with a mad Dog, or any other venomous Beatt, you shall take *Plantain*, and beat it in a Morter with *Bolearmoniack*, *Sargus Draconis*, Barly meal, and the white of Eggs, and playster-wise lay it to the sore, renewing it once in fourteen hours.

CHAP. XXII.

Of the falling down of the Pallate of a Beasts mouth.

LAbour and drought will make the Palate of a Beasts mouth to fall down, which you shall know by a certain hollow changing in his mouth when he would eat, also by his fighting and a desire to eat but cannot. The ordinary cure is, you shall cast the Beatt, and with your hand thrust it up; then let him bloud in the pallate, and annoint it with Hony and Salt; and then put him to grasse, for he may eat no dry meat.

CHAP. XXIII.

Of any grief or pain in the hoof of a Beatt, and of the Foule.

TAKE *Mugwort*, and beat it in a Morter with hard Tallow, and apply it to the hoof of the Beatt, and it will take away any grief whatsoever. But if he be troubled with that disease, which is called the *Foule*, and cometh most commely by treading in a mans ordure, it breedeth a forenesse and swelling between the cloyes: you shall for the cure cast the beatt, and with a Hay rope rub him so hard between the same, that you make him bleed, then annoint the place with *Tar*, *Turpentine*, and *Kitchin-fee*, mixt together, and keep him out of the dirt, and he will soon be whole.

CHAP. XXIV.

*Of bruifings in general, on what part of the body
soever they be.*

TAke *Broocklime* the lesse, and fry it with tallow, and so lay it to the bruise, and it will either expell it, or else ripen it, break it, and heal it, as hath been often approved.

CHAP. XXV.

Of swallowing down Hens-dung, or any poysonous thing.

IF your beast have swallowed down Hens dung Horse-leeches, or any other poysonous thing, you shall take a pint of strong Vinegar, and half so much Oyl: or sweet butter, and two spoonfulls of *London-treacle*; and mixing them together on the fire give it the beast warm to drink, and it will cure him.

CHAP. XXVI.

Of killing Lice or Ticks,

BEasts that are bred in Woods under dropping of Trees, or in barren and unwholesome places are much subject to Lice, Ticks, and other Vermine. The cure whereof is to anoint their body with fresh Grease, Pepper, Stavesaker, and Quicksilver, beaten together untill the Quicksilver be slain.

CHAP. XXVII.

Of the Dewboln, or generall Gargill.

HOWsoever some of our *English* Writers are opioned, this *Dewboln* or general Gargill, is a poysonous and violent swelling, beginning at the neather part of the *Dewlap*; and if it be not prevented, the swelling will ascend upward to the Throat of the Beast, and then it is incurable: therefore for the preservation of your Beast, as soon as you see the swelling appear, cast the Beast and slit the swelled place of the *Dewlap*, at least four inches in length; then take a handfull or two of *Speare-grasse*, or *Knot-grasse*, and thrusting it into the wound, stich it up close; then annoynt it with *Butter* and *Salt*, and so let it rot and wear away of it self: if you perceive that his body be swell'd, which is a signe that the poyson is dispersed inwardly, then it shall be

good

good to give him a quart of *Ale* and *Ren* boyl'd together, and so to chafe him up and down well, both before and after.

CHAP. XXVIII.

Of the losse of the Cud.

A Beast will many times through carelesnesse in chewing, lose his Cud, and then moun and leave to eat: The certain cure whereof is to take a little sowre *Leaven* and *Salt*, and The beating it in a morter with mans *Urine* and *Lome*, make a pretty Cure. big ball, and force him to swallow it down, and it will recover his Cud.

CHAP. XXIX.

Of killing of all sorts of Worms, either in the Oxe, Cow, or Calfe.

THere is nothing killeth Worms in the bodies of Cattell sooner then *Savin* chopt small, and beaten with sweet *Butter*, and so given in round balls, to the beast; nor any thing maketh them void them so soon as sweet *Wort* and a little black *Sope*, mixt together, and given the beast to drink.

CHAP. XXX.

Of the vomiting of Bloud.

THis disease commeth of the ranknesse of bloud got in fruitful Pastures after hard keeping, insomuch that you shall see the bloud flow from their mouths. The cure is, first to let the The Beast bloud, and then give to drink *Bolearmoniack* and *Ale* mixt Cure. together.

CHAP. XXXI.

Of the Gout in Cattell.

IF your Beast be troubled with the Gout, which you shall know by the sudden swelling of his joynts, and falling again, you shall take *Gallingall*, and boyl it in the dregs of *Ale* and sweet *Butter*, and Pultis-wise lay it to the offended member.

CHAP. XXXII.

Of Milking of a Beast.

Milking is when a Beast will oft fall, and oft rise, as he is at his labour. and cannot indure to stand any while together: it proceeds from some stroke or bruise, either by cudgill or other blunt weapon: And the cure is, not to raise him suddenly, but to give him *Ale*, and some stone *Pitch* mixt very well together to drink.

CHAP. XXXIII.

Of provoking a Beast to pisse.

IF your Beast cannot pisse, steep Smalage, or the roots of Radish in a quart of Ale, and give it him to drink, and it presently helpeth.

CHAP. XXXIV.

Of the over-flowing of the Gall in Beasts.

THe over-flowing of the Gall, is ever known by the yellownesse of the skin, and the eyes of the beast: And the cure is, to give him a quart of Milk, Saffron, and Turmerick mixt together, to drink after he hath been let blood, and so do three mornings together.

CHAP. XXXV.

Of a Beast that is goarded, either with a stake, or the horn of another Beast.

TAke Turpentine and Oyl, and heat them on the Coals, and then taint the wound therewith, and it will heal it.

CHAP. XXXVI.

Of a Cow that is whethered.

THis disease is, when a Cow after her calving cannot cast her cleaning, and therefore to compell her to cast it, you shall take the juyce of Bettony, Mugwort, and Mallows, of each three spoonfuls, and mix it with a quart of Ale, and give it the Beast to drink: and also give her to eat scorched Barley, and it will force her to avoid her burthen suddenly.

CHAP. XXXVII.

Of drawing out stubs, or Thorns.

TAke black Snails and black Sope, and beat them to a salve, and apply them to the sore, and it will draw the grief to be apparent.

CHAP. XXXVIII.

Of purging of Cattell.

THere is nothing doth purge a Beast so naturally, as the green weedy grasse which groweth in Orchards under trees, nor any Medecine doth purge them better than Tar, Butter, and Sugar-Candy mixt together, and given in balls as big as an Hens Egg.

CHAP.

CHAP. XXXIX.

Of being sh ew-run, or shrew bitten.

A Shrew Mouse, which is a Mouse with short uneven legs, and a long head like a Swines, is venemous, and if it bite a Beatt, the sore will swell and rankle, and put the Beatt in danger; but if it onely run over a Beatt; it seebleth his hinder parts, and maketh him unable to go: The cure then for being shrew bitten, is the same which is formerly shewed for the biting of other venemous Beasts: But if he be shrew-run, you shall onely draw him under, or beat him with a bramble, which groweth at both ends in the Furrows of Corn lands.

CHAP. XL.

Of faintnesse in Labour.

IF your Beatt in his labour, and heat of the day chance to faint; you shall loose him, and drive him to the running stream to drink, and then give him two, or three Ospines full of parch'd Barly to eat, and he will labour fresh again.

CHAP. XLI.

Of breeding Milk in a Cow.

IF your Cow after her Calving cannot let down her Milk; you shall give her a quart of strong Posset-Ale, mixed with *Anniseeds*, and *Coliander-seeds*, beaten to powder, to drink every morning, and it will not onely make her Milk spring, but also increase it wonderfully.

CHAP. XLII.

Of Bones out of joynt, or bones broken.

IF any Beatt have a bone broken, or misplaced, after you have set it right, and in his true place, you shall wrap a plaister about it, made of *Burgundy-pitch*, *Tallow*, and *Linseed-oil*, and then splent it, and let it remain unbound 15 dayes, and it will do much good.

CHAP. XLIII.

Of the Rot in Beasts.

IF your Beatt be subject to rottenesse, which you may know by his leannesse, mislike, and continually scowring behind: you shall take *Bay-berries*, beaten to powder, *Myrrhe*, *Ivy-leaves*, *Elder leaves*, and *Feather-few*, a good lump of dry Clay, and Bay-salt, mix these together in strong Urine, and being warm, give the

the Beast half a pint thereof to drink, and it will knit and preserve them.

CHAP. XLIV.

Of the Pant as.

THe Pant as is a very faint disease, and maketh a Beast to sweat, shake, and pant much. The cure is, to give him Ale & Urine, mixt together, a little foot and a little earning to drink two or three mornings before you labour him.

CHAP. XLV.

Of all manner of Wounds in Beasts.

TO cure any Wounds in beasts, given be edge-tools, or otherwise, where the skin is broke; take Hogs-grease, Tar, Turpentine, and Wax, of each a like quantity, and a quarter so much Verdigrease, and melt them altogether into one salve, and apply it to the wound, by spreading it upon a Cloath, and it will heal it without any rank or dead flesh.

The end of the Bull, Oxe, Cow, and Calfe, &c.



OF SHEEP.

CHAP. I.

Of Sheep in general, their use, choise, shape, and preservation.



TO enter into any longer discourse of praise or profit of Sheep, or to shew my reading by relation of the Sheep of other Countreys, were frivolous; because I am to write much in a very little Paper, and I speak onely to my Countrey-men, the *English*, who desire to learn and know their own profit. Know then
that

that whosoever will stock himselfe with good sheep, must look into the nature of the soyle in which he liveth : For sheep according to the earth and aire in which they live, do alter their nature and properties : The barren sheep becomming good, in good soyles, and the good sheep barren in evill soyles. If then you desire to have sheep of a curious fine staple of Woole, from whence you may draw a thread as fine as filke, you shall see such in *Herefordshire*, about *Lempster fide*, and other speciall parts of that Country ; In that part of *Worcestershire* joyn- ing upon *Shropshire*, and many such like places : yet these sheep are very little of bone, black faced, and bear a very little burthen. The sheep upon *Cotfall* hills are of better bone, shape, and bur- then, but their staple is courser and deeper. The sheep in that part of *Worcestershire*, which joyneth on *Warwickshire*, and many parts of *Warwickshire*, all *Leicestershire*, *Buckinghamshire*, and part of *Northamptonshire* ; and that part of *Nottinghamshire* which is exempt from the Forrest of *Sherwood*, beareth a large boned sheep of the best shape, and deepest staple ; chiefly if they be pasture sheep, yet is their wooll coarser then that of *Cotfall*, *Lincolnshire* especially in the salt Marshes, have the largest sheep, but not the best Wool, for their legs and bellies are long and naked, and their staple is coarser then any other, the sheep in *Yorkshire*, and so Northward, are of a reasonable big bone, but of a staple rough and hairy, and the welsh sheep are of all the worst, for they are both little, and of worse staple ; and indeed are praised only in the dish, for they are the sweetest Mutton.

If now, knowing the natures and properties of the sheep of every Countrey, you go about to stock your ground, be sure to bring your sheep from a worser soile to a better, and not from a better to a worse. The Lear, which is the earth on which a sheep lyeth, and giveth him his colour, is much to be respected : the red Lear is held the best ; the duskyish, inclining to a little rednesse is tolerable ; but the white or dirty Lear is stark naught. In the choice therefore of your sheep, chuse the biggest boned, with the best wool ; the staple being soft, greasie, well curled and close together, so that a man shall have much adoe to part it with his fingers. These sheep besides the bearing of the best burthen, are alwayes the best Butchers ware, and go soonest away in the Mar-

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ket.

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The shape of
a sheep.

ket. Therefore, in the choice of sheep for your breed, have a principall respect to your Rams, for they ever mar or make a flock: let them as user as you can, have these properties or shapes. First, large of body in every generall part, with a long body, and a large belly, his fore-head would be broad, round, and well rising, a cheerfull large eye, strait short nostrils, and a very small muzzle; by no means any horns, for the dodder sheep is the best breeder, and his issue never dangereth the Dam in yeaining, as the horned sheep do: besides, those sheep which have no horns, are of such strength of head, that they have oft been seen to kill those sheep which have the largest horns, and best wrinkled: A sheep would have a large upright neck, somewhat bending like the neck of a horse, a very broad back round buttocks, a thick tayle, and short joynted lgs small, clean and nimble, his wool would be thick and deep covering his belly all over; also his face, and even to his nostrils, and so downward to his very knees and hinder houghs. And thus according to the shape, properties and soil from whence you chuse your Rams, chuse the rest of the flock also.

When Ewes
should bring
forth,

The best time for your Ewes to bring forth their young ones is, if they be pasture sheep, about the latter end of *April*, and so untill the beginning of *June*; but if they be field-sheep, then from the beginning of *January* till the end of *March*, that their Lambs may be strong and able before *May* day, to follow their Dams over the rough Fallow-lands, and Water-furrowes, which weak Lambs are not able to doe: and although you yeain thus early in the Winter, when there is no grasse springing, and the sharpnesse of the weather also be dangerous, yet the husbandman must provide shelter and sweet fodder, and the shepherd with great vigilance be stirred at all hours, to prevent evils, for the reasons before shewed, and though the Ewe at the first be scant of Milk, yet as the warm weather increaseth, and the grasse beginneth to spring, so will her milk spring also.

Ordering
Lambs.

Now for your Lambs: about *Michaelmas* you shall separate the male from the female; and having chosen out the worthie, which you mean to keep for Rams, put them aside, and then gueld the rest, which every orderly Shepherd can do sufficiently, for there is no danger in guelding young Lambs. The first year a male Lamb is called a weather hog, and a female Lamb

an Ewehog: the second year the male is a Weather, and the female a Theafe, and then she may be put to the Ramme: but if you let her go over that year also, then she is a double Theafe, and will both her self be the goodlier sheep, and also bring forth the goodlier Lambe; whence it comes, that the best sheep-masters, make more account of the double Theafe, then of any other breeder.

You shall observe never to shear your Lambs till they be full hogs: you shall ever wash three dayes before you shear: the best time of shearing is from *June* to *August*. Ewes are ever good breeders, from three years old till their mouths break. If you would have your Ewes bring forth male Lambs, note when the North wind bloweth, and driving your flock against the wind, let your Rammes ride as they go, and this will make the Ewes to conceive male lambs: so likewise, if you would have female lambs, put your Rams to the Ewes when the wind bloweth out of the South.

Now for the general preservation of sheep, feed them as much as you can upon high grounds, which are dry and fruitfull, the grasse sweet, yet so short that it must be got with much labour but if you must force-perforce feed upon low and moyst grounds which are infectious; you shall not bring your sheep from the fold (for I now speak to the honest English husbandman) untill the Sun be risen, and that the beams begin to draw the dew from the earth, then having let them forth, drive them to their place of feed, and there with your dog chase them up and down till they be weary, and then let them either feed or take their rest, which they please. This chasing first, beateth away milt dews; and all other dews from the earth, as also those webs, kels, and flakes which lying on the earth, and a sheep licking them up, do breed rotnenneffe: Also this chasing stirreth up that natural heat in a sheep, which drinketh up, and wasteth the abundance of moysture, which else would turn to rotnenneffe. Besides, a sheep being thus chased and wearied, will fall to his food more deliberately, and not with such greedinesse, as otherwise he would, and also make choice of that meat which is best for his health. If a Shepherd once in a month, or alwayes when he hath occasion to handle his sheep, rub their mouths with Bay-salt, it

is an excellent preservation against all manner of sicknesse, and very comfortable for a sheep also, for a sheep will very well live, and abate of his flesh by rubbing his mouth once a day with Bay-salt, only. Now, forasmuch as notwithstanding these principles, a sheep falleth into many infirmities; hereafter followeth the severall cures of all manner of diseases.

CHAP. II.

The signs to know a sound sheep, and an unsound sheep.

IF a sheep be sound and perfect his eye will be bright and cheerful, the white pure without spot, and the strings red, his gums also will be red, his teeth white and even, his skin on his brisket will be red, and so will each side betwixt his body and his shoulder where wool grows not, his skin in generall will be loose, his wool fast, his breath long, and his feet not hot: but if he be unsound, then these signs will have contrary faces; his eyes will be heavy, pale, and spotted, his breast and gums white, his teeth yellow and foul, his wool when it is pulled will easily part from his body; and when he is dead open him, and you shall find his belly full of water, his fat yellow, his liver putrified, and his flesh moyst and watrish.

CHAP. III.

Of sicknesse in generall, or the Feaver amongst sheep.

CHange of pasture is a great cure for sick sheep; yet if you find any more particularly troubled then the rest, take *Puliot-Royall*, and stamping it, mix the juyce with water and vinegar the quantity of halfe a pint, and give it the sheep with a horn, luke-warm; and by no means let the sheep be much chafed: Also in these sicknesses the shepherd must have a great care to note from whence the disease groweth: if it proceed from cold, then to drive his sheep to shelter; if from heat, then to feed them in shady and cool places.

CHAP. IV.

Of the generall Scab or Itch in sheep.

THIS generall Scab or Itch in sheep, is of all diseases the most common among them; proceeding from rainy and wet weather, which falling upon their skins, if they happen to be chafed or heated after, they presently break forth into the scab, which you shall know by a white filthy scurfie sticking upon their

their skins. and the most usuall medicine for the same, which all shepherds use, is to annoint the place with Tar, and Grease, mixt together; but if upon the first appearance of the Itch, you steep *Pulio'-royall* in water, and wash the skin therewith, it will preserve them from running into the scab.

CHAP. V.

Of killing Maggots in Sheep.

IF a sheep be troubled with Maggots you shall take *Goose grease, Tarre, and Brimstone*, and mix them together on the fire; and then annoint the place therewith, and it will kill the Maggots.

CHAP. VI.

Of the red Water.

THE red Water is a poisonous disease in sheep, offending the heart, and is indeed as the pestilence amongst other cattel, therefore when you find any of your sheep infected therewith, you shall first let him blood in the foot between the claws; and also under the tayle, and then lay to the fore places *Rew* or *Wormwood* beaten with Bay-salt, and it helpeth.

CHAP. VII.

Of Lung-sicke, or any cough or cold.

IF your sheep be troubled with any sickness in his Lungs, which you shall know by his coughing and shortness of breath, you shall take: *Fussilage* or *Coltsfoot* and *Lungwort*, and stamping them, strain the juyce into a little hony and water, and give it the sheep to drink.

CHAP. VIII.

Of the Worm in the Claw of the Sheep, or any other part.

THIS worm breedeth commonly before, between the claws of the foot: but wheresoever it breedeth it is known by the head, which is like a tuft of hair, and will stick forth in a bunch. The cure is to slit the foot, and draw out the worm without breaking it; and then annoint the place with Tar and Tallow The Cure. mixt together, for Tar simply of it selfe will draw too much.

CHAP. IX.

Of the Wildfire in Sheep.

THIS disease which is called the Wildfire, is a very infectious sickness, and will indanger the whole flock, but howsoever incurable

incurable it is held, yet it is certain, that if you take *Chervile*, and stamping it with old *Alc*, make a salve thereof, and annoynt the sore therewith, it will kill the fire, and set the sheep safe: and though *some*, for this disease, bury the first infected Sheep alive, with his heels upward, before the sheep coat dore, yet this medicine hath been ever more effectuall.

CHAP. X.

Of the disease of the Gall, as Cholera, Laundise, and such like.

The Cure.

THese diseases are known by the yellownesse of the sheeps skinne: and the cure is, to take *Plantain* and *Lettice*, and stamping them together, mix their juice with vinegar, and give halfe a pint to a sheep, to drink.

CHAP. XI

Of the tough fleam, or stopping in Sheep.

IF your sheep be stoppe in the head, breast, or welland, either with tough fleam, or other cold humours, which you shall know by the running of the nostrils; then take the powder of *Pulul-royal*, and mixing it with clarified Hony, dissolve it in warm water, the quantity of halfe a pint, and give it the Sheep to drink, and it will loosen the fleam.

CHAP. XII.

Of bones broken in sheep, or bones out of joint.

IF your sheep chance to break a legge, or have any other bone misplaced, you shall after you have set it straight and right again, first bathe it with oyle and wine, and then dipping a cloath in molten *Parchgrease*, roul it about, and splint it as occasion shall serve; and so let it remain nine dayes, and dresse it again, and at the end of the next nine dayes, the sheep will be able to go.

CHAP. XIII.

Of any sicknesse in Lambs.

IF your Lambe be sick, you shall give it *Mares-milk*, or *Goats milke*, or the own dam milk and Water to drink, and keep it very warm.

CHAP.

CHAP. XIV.

Of the Sturdy, turning-evil, or more-sound.

THese diseases proceed from ranknesse of blood, which offendeth the brain, and other inward parts. The cure then is to let the sheep blood in the eye veins, temple veins, and through the nostrils, then to rub the places with young Nettles bruised. The Cure.

CHAP. XV.

Of diseases in the eyes, as the Haw, dimnesse, or any sorenesse.

IF your sheep have any imperfection in his eyes, you shall drop the juyce of *Selandine* into them, and it is a present help.

CHAP. XVI.

Of water in a Sheeps belly.

IF a sheep have water in his belly between the outward flesh and the rim, then you may safely adventure to let it forth by making a little hole through the flesh, and putting in a quill; but if it be between the rim and the bag, then it is incurable; for you may by no means cut the rim asunder: When the water is let forth, you shall stitch up the hole, and annoint it with Tar and Butter mixed together: This water if it remain in the body, will rot the sheep.

CHAP. XVII.

Of the Tag'd or Belt in sheep.

A Sheep is said to be Tag'd or Belt, when by a continuall squirt running out of his ordure, he berayeth his tayle, in such wise, that through the heat of the dung it scaldeth, and breedeth the scab therein. The cure is, with a pair of sheers to cut away the tags, and to lay the fore bare and raw, and then to throw earth dryed upon it, and after that Tar and Goose-grease mixt together. The Cure.

CHAP.

CHAP. XVIII.

Of the Pox in Sheep.

The Cure.

THe Pox in sheep are small red pimples like purples rising on the skin, and they are infectious. The cure is, to take Rosemary, and boyle the leaves in vinegar, and bath the sores therewith, and it will heal them: change of pasture is good for this disease, and you shall also separate the sick from the sound.

CHAP. XIX.

Of the Wood-evill, or Cramp.

The Cure.

THis disease is weakness or straining of the sinewes got by colds and surfeits: it is very mortall, and will run through a whole flock. The cure is, to take *Cink foile*, or *Five-leaved-grass*, and boyl it in wine, and give the sheep a pint thereof to drink, & keep him warm, and chafe his legs with oyl and vinegar.

CHAP. XX.

Of making an Ewe to love her own Lamb, or any other Ewe's Lamb.

IF an Ewe grow unnaturall, and will not take to her Lamb after she hath yeaned it, you shall take a little of the clean of the Ewe, which is the bed in which the lamb lay, and force the Ewe to eat it, or at least chew it in her mouth, and she will fall to love it naturally: but if an Ewe have cast her lamb, and you would have her take to another Ewes lamb, you shall take the lamb which is dead, and with it rub and daub the live lamb all over, and so put it to the Ewe; and she will take as naturally to it, as if it were her own.

CHAP. XXI.

Of licking up poyson.

The Cure.

IF a sheep chance to lick up any poyson, you shall perceive it by a sudden swelling and reeling of the sheep. And the cure is, as soon as you see it stagger, to open the mouth, and you shall find one or more blisters upon the tongue roots, you shall presently break them with your fingers, and rub them with earth or sage, and then piss into the sheeps mouth, and it will do well.

CHAP.

CHAP. XXI.

Of Lambs yeaned sicke.

IF a Lamb be yeaned sick and weak, the Shepheard shall fold it up in his cloake, blow into the mouth of it, and then drawing the dams dugs, sqiirt milke into the mouth of it.

CHAP. XXIII.

Of making an Ewe to be easily delivered.

IF an Ewe can hardly bring forth or yeane her Lamb, you shall take *Balsamm* or *Horse mint*, and put either the joyce or powder of it into a little strong ale, and give it the Ewe to drink, and she wil yeane presently.

CHAP. XXIV.

Of teeth loose.

IF a Sheeps teeth be loose, let him blood in his gums, and under his taylor, and then rub his teeth with Earth, Salt and Sage.

CHAP. XXV.

Of encreasing Milk in Ewes.

NOthing encreaseth Mickle in Ewes more then change of pasture and feeding : driving them one while unto the hills, another while to the Valleys ; and where the grasse is sweetest and short, and the sheepe eateth with best appetite, there see you continue longest : for touching, giving them *Fenches*, *Dill*, *Aniseeds*, and such like, this change of ground will make Milke spring much better.

CHAP. XXVI.

Of the staggers, or leaf sicknesse in Lambs, or elder Sheep.

THe Staggers is ingendred in sheepe by surfeiting on Oake-leaves, hawthorn leaves, or such like, which Lambs are very apt unto : it is a cold corrupt blood, or steam, gathered together about the brain : indeed it is suddenly mortal. The best cure is, *The Cure.* to take *Asperula*, dissolved in warme water, & put the quantity of half a spoonfull into each ear of the sheepe or Lamb, and it is a present remedy.

CHAP. XXVII.

Of Worms in the guts of Sheep or Lambs.

Sheep are as subje to wormes in their guts or stomachs as any other cattel whatsoever, which you shall know by beating

The Cure.

ting their bellies with their feet, and by looking continually at their bellies. The cure is, to take the leaves of *Coriander*, and to stamp them, and then mixing the juyce thereof with hony, to give the sheep to drink; and then chase him a little, and keep him two or three hours fasting.

CHAP. XXVIII.

Of the losse of the Cudde.

THAT which helpeth the losse of the Cudde, in Oxe or Cow the same is a present remedy for sheep, and is spoke of before in a former chapter.

CHAP. XXIX.

Of saving sheep from the Rot.

This disease of Rottenesse is the cruellest of all other amongst Sheep, and extendeth his violence over all the flock: Nay, over Town-ships and countreyes; and though it be held of men incurable, yet good Governments, and this Receipt I shall deliver you, will not only prevent it, but preserve your sheep safe: Therefore, as soon as you perceive that any of your sheep are tainted, you shall take *Adraces*; which is a certain salt, gathered from the salt Marches, in the heat of Summer, when the tide is going away, and leaving certain drops of salt water on the Grasse, then the violent heat of the Sun turns it to salt; and to speak briefly, all salt made by the violence of the Suns heat only, is taken for *Adraces*, of which there is infinite store in Spain. With this *Adraces* rub the mouths of all your sheep once a week, and you shall never need to fear the rotting of them, for it hath been well tryed, and as I imagine, the experiment is found out from this very ground. It is a rule and well known at this day, in *Lincolnshire*, and in *Kent*, that upon the salt Marches, sheep did never dye of the rot: no other reason being known therefore; but the licking up of that salt, and without doubt, it is most infallible and most easie.

CHAP. XXX.

A few precepts for the Shepherds.

IT is meet that every good and carefull Shepherd know what food is good for sheep, what hurtfull: that following the one and eschewing the other, he may ever keep his cattel in good health.

health. The grasse that is most wholsome for sheep, is that which hath growing in it good store of *Mellilot*, *Claver*, *Selfe-heal*, *Cincklefoot*, *Broom*, *Pimpernel* and white *Henband*.

The grasse which is unwholsome for Sheep, is that which hath growing amongst it, *Spare wort*, *Penny wort*, or *Penny grasse*, and any weeds which grow from inundation or over-flows of water ; likewise, *Knot-grasse* is not good, nor mildewed grasse. Of all Rots the hunger Rot is the worst, for it both putrieth the flesh and skin, and this is most incident to field sheep, for to pasture sheep it never hapneth. The next Rot to it is the pelt rot, which cometh by great store of Rain, immediately after a sheep is new shorn, which, mildewing the skin, corrupteth the body ; and this also is most incident to field sheep, which want shelter.

There be little white Snails which a sheep will lick up, and they will soon rot him.

There will grow upon Ewes teats little dry scabs, which will stop their milk, when the Lambs suck ; the Shepheard must have a care to pull them away.

A sheep will have a bladder of water under his chin sometimes which the shepheard must be carefull to let out and lance, or the sheep will not prosper.

It is not good to sheare sheep before Midsummer, for the more hee sweateth in his Wool, the better and more kindly it is.

If you will know the age of your Sheep, look in his mouth ; and when he is one shear, he will have two broad teeth afore : When hee is two shear, he will have four broad teeth afore ; when he is three, he will have six ; and when he is four shear, he will have eight : and after those yeares his mouth will begin to break : For touching that Rule of the evennesse and unevennes of the mouth, it is uncertain, and faileth upon many occasions.

The end of the Sheep.



Of Goates.

CHAP. I.

Of Goats and other Natures.



Seeing Goates are not of any generall use in our Kingdome, but only nourished in some wild and barren places, where cattle of better profit can hardly be maintained, as in the mountainous parts of *Wales*, in the barrenest parts of *Cornwall* and *Devonshire*, on *Mabyn* hills, and some few about the *Peaks*; I will not stand upon any large discourse, but as briefly as I can, give you the natures and cures. You shall then know, that the Goat is a beast of a hot, strong, and lusty constitution; especially in the act of generation; that they exceed all other cattle; delight to live in mountains that be high craggy, and full of bushes, bryars, and other wood, they will feed in any plain pasture, but their special delight is in browsing upon Trees, they are so nimble of foot that they will go in places of greatest danger. The profit which comes from them is their milk which is an excellent restorative, and their Kids which are an excellent Venison. They are in other countreyes, as in *Spain*, the Islands of the *Azores*, and the Islands of the *Canaries*, preserved for the chase and for hunting as we preserve our Deer both Red and Fallow, and make excellent pastime.

The Nature
of Goats.

His shape.

For the shape of the Goat: he would have a large body, and well hayred, great legs, upright joynts, not bending a neck plain and short, a head small and slender, large horns, and bending, a big eye, and a long beard, and his colour white, black, or pike. Some do use to shear them, to make rough maniles of: but it is not so with us in *England*. The she Goat would have large teats and big udder, hanging ears, and no horns, as they have in many places.

The ordering
of Goats.

These Goats would be kept in small flocks, or herds, as not above

above a hundred in a heard : As they must in the heat of Summer have much shade, so in the Winter likewise much shelter : for they can neither endure extremity of heat nor cold, especially, the violence of winter, for that will make the shee Coat cast her Kidde, or bring it forth untimely. These love Mast well, but yet you must give them other food to mixe with it. The best time to let the Male and Female go together, is about the beginning of December. If you house your Goats in the winter, let them have no litter to lye on, but the floor paved, or gravelled, for otherwise their own heat will annoy them : they must also be kept very cleanly, for they can indure no filthy favours. For the young Kids, you shall in all parts order them as you do your Lambs.

Now for their preservation, if they be suffered to go and chuse their own food, they are to themselves so good Physitians, that they will seldome or never be troubled with any inward sickness: only the unnaturall excesse of their lust maketh them grow so old, and so both past use and profit. For those particular diseases which accidentally fall upon them : here followeth the cure.

CHAP. II.

Of the Pestilence in Goats, or any inward and hidden sickness.

IF you perceive your Goats to droop, or look with sullen or sad countenances, it is an assured sign of sickness, but if they foam or lather at the mouth, then it is a sign of the Pestilence. The Cure. The cure is, first, to separate them from the sound, then to let them bleed, and give them the buds and leaves of *Chadane*, with rushes and reeds to eat, and it is a present remedy.

CHAP. III.

Of the Dropsie in Goats.

GOats are very much subject unto the Dropsie, through their The Cure. excess of drinking water, the sign whereof is a great inflammation and heat in the skin : the cure is, to seeth Wormwood in Water and Salt; and give a pint thereof to the Goat to drink divers mornings, for to slit and let out the water under the shoulder, is not so certain and safe a cure.

CHAP. IV.

Of stopping the Teats.

The Cure.

THere will ingender in the teats of Goats, a certain tough hard fleam, which will stop the milk from issuing : which to cure, you shall with your finger and your thumb pull it away and then annoynt the place with hony, and the Goats milk mixt together.

CHAP. V.

Of Goats that cannot Kiddle.

Goats above all other cattle, are troubled with hardnesse in Kidding, by reason that if they be chased or hunted their Kidds will turn in their bellies : the remedy then to preserve them from that danger, is to keep them quiet and untroubled, untill they have Kiddled.

CHAP. VI.

Of the Tetter, or dry Scab in Goats.

TO heal any Tetter, or dry scab in Goats, take *Black scape, Tarce, Hogs-mease, and Brimstone*, mixe them well together and annoynt the sores therewith, and it will heal them.

CHAP. VII.

Of Galling Kiddees in the Summer season.

Kids being gelt in the Summer season, as those which are late kidded must necessarily be : the flye will be so busie with the sore, that with their blowings they will breed such store of Maggots in the wound, that it will indanger their lives : to defend them then from such annoyance of the flye, you shall take Soot, Tar, and thick Cream, and mixe them well together, and annoynt the wound therewith, and it will both heal it and keep the flye away.

CHAP. VIII.

Of the Itch in Goats.

IF your Goats be troubled with any itch, so that they cannot feed for clawing or biting themselves, you shall wash their skins with old Chamber-lye, and green Coporas well boyled together, and it will kill the Itch.

CHAP. IX.

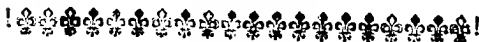
Of the Tuel stopping in Goats.

GOates, when they are sucking on their danms, or when they are new Kiddled, will commonly have a great laxer or squirt, so that the ordure which cometh from them, if it be not well clenfed and taken from them, it will with their own naturall heat so bake and dry, that it will stop up their Tuels, so that they cannot dung, which if it be not holpen, the Kidde will dye. The cure is, to cleanse the place, and open the Tuel, and then put into it an inch or thereabout of a small Candles end dipt in honey, and then annoynt all the Tuel over with Capons-grease. The Cure.

CHAP. X.

Of the Staggers, or reeling evill in Goats.

IF your Goats be troubled with the Staggers or Reeling evill, which is a disease bred in them by the violent heat of the Sun, you shall take *Bay-salt* and *Torrayce*, and mixe them together, and give the Goat half a pint thereof to drink: or else take *Houf-leek*, and *Dracons*, of each alike: so grounds of *Ale* with a little new *Milke* stamp the herbs, and then mingle them together, then put thereto a few *geves* grossely beaten, and then boyl it again, then cool it, and give the sicke Goat three or four spoonfuls thereof to drink, and it will cure her. Now for any other infirmities which shall happen unto Goats, you may cure them with the same medicines which you cure sheep, for their natures do not much differ.

The end of the Goat.*Of Swine.*

CHAP. I.

Of all manner of Swine, their natures, use, hapes, and preservacions.

ALthough Swine are accounted troublesome, noyome, unruly, and greatly ravenous, as indeed their natures are not much differing from such qualities; yet the utility and profit of them, will easily wipe off those offences; for

for to speak truly of the Swine, he is the Husbandmans best Scavenger, and the Husbwifes most wholesome sink ; for his food and living is by that which will else rot in the yard, make it beastly, and breed no good manure, or being cast down the ordinary sink in the house breeds noytome foules, corruption, and infection ; for from the Husbandman he taketh pulfe, chaff, barme dust, mans ordure, garbage, and the weeds of his yard : and from the huswife her draffe, swellings, Whey, washing of tubs, and such like, with which he will live and keep a good estate of body, very sufficiently ; and though he is accounted good in no place but the dish only, yet there he is so lovely and so wholesome that all other faults may be born with, he is by nature greedy, given much to root up grounds and tear down fences, he is very lecherous and in that act tedious and brutish, he is subject to much anger, and the fight of the Boars are exceeding mortal : they can by no means indure stormes, winds, or foul weather, they are excellent observers of their own home : and exceeding great lovers one of another : so that they will dye upon any beast that offendeth their fellows.

Of the choise
and shape of
Swine.

Now touching the choise of Swine, you shall understand that no Country in England breedeth naturally better Swine one then another : but if any have preheminence, then I must prefer *Leicestershire* and some parts of *Northamptonshire*, and clay countries bordering on *Leicestershire*, and the reason I take to be their great multiplicity of grain, especially beans and pulfe. For the Malt countreys, though they are good feeders they are no large breeders, whence it comes that your wild swine is ever your least swine, but your sweetest Bacon. But if the Race and keeping be alike, the proportion and goodnesse will be alike ; therefore in the choise of your swine, chiefly the boars and sows which you breed of, let them be long and large of body, deep sided, and deep bellied, thick thighs, and short legs, for though the long-legged swine appear a goodly beast, yet he but coufureth the eye and is not so profitable to the Butcher, high claws, thick neck, a short and strong groove, and a good thick chine well set with strong bristles : the colour is best which is all of one peece, as all white, or all fanded ; the pils are the worst and most apt to take meazels ; the black is tolerable, but our Kingdome through the coldnes breedeth them seldome.

The

The use and profit of swine is onely (as the husbandman saith) The use and
profit of swine for the roose, which is bacon; for the spit, which is porke; for sowe and pudding; and for breed, which is their pigs onely. To have two many sowes in a yard is not good; for their increase and bringing forth is so great, that they will for want of food eat one another: A sow will bring forth pigs three times a year, namely at the end of every ten weeks, and the number are great which they will bring forth: for I have known one sow have twenty pigs at one litter; twelve, fourteen, and sixteen, are very common; yet a sow can bring up no more pigs than she hath teats, therefore look how many she hath, and so many pigs preserve of the best, the rest cast away or put to other sowes which want, yet give suck. A sow will bring pigs from one year old, till she be seven years old: The pigs which you rear, after you have chosen the best for Boars or Sowes to breed on, geld the rest both male and females: the males will make goodly hogs, which are excellent bacon or porke, and the females which are called splayd-guils, will do the like, and breed a great deal more grease in their bodies, whence it comes, that the husbandman esteems one splayd-guilt before two hogs. Young shots which are Swine of three quarters, or but one year old, are the daintiest pork.

Now for the preservation of Swine, it is contained in their government and food, and is all that belongeth to the office of the swinherd. The orderliest feeding of swine is, (when you keep them, but in good state of body, and not seek to fat them) in the morning early when you unfie them, to give them draff, pulse, or other garbage, with swilling in their troughes, and when they have eaten it, to drive them to the field, where they may graze and root for their food: and of grounds the soft marsh and moorish grounds are the best, where they may get the roots of Seedge, Reeds, Rushes, Knot-grasse, and such like, which is wholesome for swine, or the fallow or tick field, where they may root at pleasure, and by killing the weeds bring profit to the earth, and at the fall of the lease, it is good to drive them to hedger, where they may get Haws, Hips, Sloes, Crabs, or such fruit, which is also very wholesome: and the poore sort will gather their fruits, and keep them safe to feed their Swine with all the

Winter. When evening cometh, you shall drive your Swine home, and then filling their troughs with draff and swillings, let them fill their bellies, and then stie them up, so shall you keep them from doing other hurts and injuries. If once in a fortnight you mixe with your swillings some Radle or red Oaker, it will preserve them wonderfully from meazels, and all inward infections: and thus much for the general discourse of Swine: now I will proceed to their particular infirmities, and other businesses.

CHAP. II.

Of the Fever, or any hidden sickness in Swine.

The Cure.

There is no beast maketh his sickness so apparent as the Swine; for when he findeth any griefe or distemperature in his body, he presently droopeth, forsakes his meat, and will not eat till he find in himselfe a perfect recovery: therefore when you shall so find him to forsake his meat, you shall first let him blood under his tayle, and under his ears, and if they bleed not freshly enough, you shall beat them with a small stick, and that will bring forth the blood; then wrap about the wounds the bark of an young Osier, and then keep him warm, and give him to drink warm swillings, well mixt with barley meal, and red oaker.

CHAP. III.

Of the Murren, Pestilence, or Cather in Swine.

The Cure.

These diseases being all of one nature, are vry much incident in swine, and spring from many grounds as from corruption in blood, ingendred by the eating of rotten fruit, or too much Butchers garbage, and many times by eating too rank grasse, wherein is much *Hemlock*: their particular signs are moyst eyes, and their heads borne on each side; but their general knowledge is their fasting and mortality: the cure is, to give them in wain wash, *Hent-dung*, and boyld *Liverwort*, with a little *Red Oaker*.

CHAP. IV.

Of the Gall in Swine.

Swine will have an over flowing of the Gall, because choller is much powerful in them, which you shall know by a swelling

ling which will rise under their jawes, and the cure is, to stamp *The Cure.*
Gallwort or *Saffron*, and mix it with honey and water, and then
 straining it, give it the Swine to drink by a pint at a time.

CHAP. V.

Of the Meazels in Swine.

THis disease of all other is most common in Swine, and with
 ease helped; as thus: you shall take the oldest Urine you can
 get, and mix it with red Oaker till it be thick, and about
 the quantity of an ale-quart, then mix it with a gallon of warm
 sweet Whey, and give it the swine to drink, after he hath been
 kept all night fasting.

CHAP. VI.

Of Impostumes in any part of a Swine.

Swine will have Impostumes in any part of their bodies, as
 under their throats, their ears, bellies, and oft upon their sides.
 The cure is, if they be soft, to lance them, and let out the matter.
 and then heal them with Tarre and Butter, but if they be not
 soft, then let the Swine bloud under the tongue, and rub all his
 mouth, chaps and groin, with wheat-meal and salt, and the Im-
 postume will go away.

CHAP. VII.

Of Vomiting in Swine.

IF your Swine do vomit and cast up his meat, you shall give
 him spelted Beans to eat; and they will strengthen his stomach.

CHAP. VIII.

Of leanness, m. slike, scurfe and manginess in Swine.

THese diseases proceed from corruption of blood, ingendred
 by lying wet in their sties, having filthy rotten litter, or
 much scarcity of meat. *The Cure.* The cure is, first to let the Swine
 blood under the tail, then to take a Wool-card, and to comb off
 all the scurfe and filth from the Swines back, even till his skin
 bleed: then take Tar, Hogs-grease and Brimstone, and mixing
 them well together, annoynt the Swine therewith, then let the
 stye be mended, his litter be sweet; and give him good warm food,
 and the Swine will be fat and sound very suddenly.

CHAP. IX.

Of the sleeping evill in Swine.

The Cure.

SWINE are much subject to this disease in the summer time, and you shall know it by their continuall sleeping, and neglecting to eat their meat: The cure is, to house them up, and keep them fasting twenty and four hours, then in the morning when hunger pincheth them, to give them to drink water, in which is stamp good-store of *Sindecrop*, which as soon as they have drunk, they will vomit and cast, and that is a present remedy.

CHAP. X.

Of pain in the Milt.

The Cure.

SWINE, are oft troubled with pain in their Milts, or Spleens, which proceedeth from the eating of Mast, when they are first put thereunto, through their over greedy eating thereof, and is known by a Reeling, going of one side. The cure is, to give them the juyce of wormwood, in a little honied water, to drink, and it will asswage the pain.

CHAP. XI.

Of the unnaturalnesse of Sows

MANY Sows do prove so unnatural, that they will devour their pigs when they have farrow'd them; which springeth from an unnatural greedinesse in them, which to help, you must watch her when she farroweth, and taketh away the pigs as they fall, then take the wreckling, or worst pig, and annoint it all over with the juyce of *Sindecrop*, and so give it the Sow again: and if she devour it, it will make her cast and vomit so extreamly, that the pain of the surfeit will make her loath to do the like again: But of all cures, the best for such an unnatural beast, is to feed her well, and then kill her.

CHAP. XII.

Of the Laxe or Flaxe in hogs.

FOR the Laxe or Flaxe in Swine, you shall give them Verjuyce and milk mixt together to drink, and then feed them with food, as spelted Beans, Acorns, or Acorn-husks. This is also excellent, and approved for young pigs and Shors, when they have any scouring.

CHAP.

CHAP. XIII.

Of the lugging of Swine with dogs.

IF your swine be extremely lugged and bitten with dogs, to prevent the rankling, and impostumation of the sores, you shall annoint it with vinegar, sope, and tallow mixt together, and it will cure the same.

CHAP. XIV.

Of the Pox in Swine.

THE Pox is a filthy and infectious disease in swine, proceeding from corrupt blood, ingendered by poverty, wet lying, lowliness, and such like, and the swine can never prosper which hath them. The cure is, to give him first to drink two spoonfuls of *London treacle*, in a pint of *honeyed water*, which will expell the infection outwardly, then to annoint the sores with *Brimstone* and *Beare-grease* mixt together, and so separate the sick from the sound. The Cure.

CHAP. XV.

Of killing Maggots in the ears or other parts of Swine.

IF Maggots shall breed in the ears of your swine, which have been lugged with dogs for want of good looking unto, as often it hapneth: you shall take either the *wettest wort* you can get, or else *honey*, and annoynt the sores therewith, and the Maggots presently will fall off and die.

CHAP. XVI.

Of feeding Swine exceeding fat, either for Bacon, or for Lard.

DIVERS men according to the nature of divers countries, have divers wayes in feeding of their swine, as those which live near unto woods and places where store of Malt is, turn their swine unto the malt for six or eight weeks, and then having got flesh and farnesse on their backs do bring them home, and put them up in sties; and then feed them for ten dayes or a fortnight after, with old dry pease, given them oft in the day a little at once, with water as much as they will drink: for this will harden the flesh and fat, so that it will not consume when it comes to boyling; this manner of feeding is good, and not to be dislik'd. The feeding of swine in wood countries.

Now

The feeding
of Swine in
champion
countrie.

Now the feeding of Swine in champion Countreyes, which are far from woods, is in this manner: First, you shall stie up those Swine which you intend to feed, and let them not come out of the same untill they be fed; but have their food and water brought unto them: Now the first two dayes you shall give them nothing; the third day you shall early in the morning give them a pretty quantity of dry pease or beans; at noon you shall give them as much more, at four of the clock as much more, and when you goe to bed as much more, but all that day no water. The next day you shall feed them again at the same hours, and set water by them, that they may drink at their own pleasure, and twice or thrice a week as your provsion will serve you, it is good to fill their bellies with sweet whay, butter-milk, or warm wash, but by no means scant the proportion of their pease; and by thus doing you shall feed a Swine fat enough for the slaughter in four or five weeks.

Of feeding at
the reek.

There be other husbandmen in champion Countreyes, as in *Leicester-shire*, and such like, that put their Swine to pease reeks, or stacks, set in the field near unto water furrowes or rundles, so that they may let the water into the stack yard, and then morning and evening cut a cutting of the stack or reek: and spread the reape amongst the Swine: this manner of feeding is best for small porkets, and will fat them very reasonable in three weeks or a month. If you feed sheep amongst your porks, it is very good, and dayly by many practised; for by that means you shall not lose any of your grain; for what your sheep cannot gather up, your porkets will.

Of feeding of
swine in or
about great
Cities.

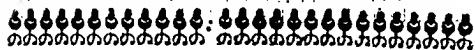
Now for such as live in or near about great Cities or Towns, as *London*, *York*, or such lik, and have neither great store of Mast, nor great store of graine; yet they have a manner of feeding as good, and somewhat more speedier then any of the other, only the bacon is not so sweet or toothsome; and thus it is. They stie up their fatlings, as is before said; and then take Chandlers graines, which is the dregs and offall of rendered Tallow, as hard skins, kels, and fleshy lumps, which will no melt together with other coorse skins of the tallow, suet, & Kitchen fee, and mixing it in warm mash, give it the Swine to eat three or four times in the day, and it will suddenly pull

him up with fatnesse, then bestow of every swine a bushel of dry pease to harden his flesh, and you may kill them at your pleasure. The only danger of this food is, it will at first sometimes make swine scoure; especially young pigs if they eat it: but as soon as you perceive such a fault, give unto your elder swine milk and verjuice, and to your sucking pigs, verjuice only.

Now lastly, the best feeding of a swine for lard, or a Boar for brawn, is to feed them the first week with Barley sodden till it break, and sod in such quantity that it may ever be given sweet; then after to feed them with raw malt from the floor, before it be dried, till they be fat enough: and then for a week after, to give them dry pease or beans to harden their flesh. Let their drink be the washing of Hogshead, and Ale-barrels, of sweet Whay, and let them have store thereof. This manner of feeding breeds the whitest, fattest, and best flesh that may be, as hath been approved by the best husbands.

Of feeding of Hogs for lard, or Boars for brawn.

The end of the Swine of all sorts.



Of Conies.

CHAP. I.

Of the tame rich Cony, his nature, choice, profit, and preservation.



ALL sorts of Conies may as well be kept tame as wild, and do above other beasts delight in imprisonment and solitarinesse, which proceedeth from the strength of melancholy in their nature, being creatures so much participating of the earth, that their delight is to live in holes, rocks, and other dark Caverns. They are violently hot in the act of generation, and perform it with such vigor and excess, that they swoon and lye in trances a good

The nature of the cony.

good space after the deed is done. The males are given to much cruelty, and would kill the young rabbits if he could come to them: whence it proceedeth, that the females after they have kindled, hide their young ones, and close up the holes, so that the buck-cony may not find them. The female or Doe conies are wonderfull in their increase, and brings forth young ones every month: therefore when you keep them tame in boxes, you must observe to watch them, and as soon as they have kindled, to put them to the buck, or otherwise they will mourn, and hardly bring up their young ones.

Of boxes for
tame Conies.

The boxes in which you shall keep your tame conies, would be made of thin wainscot boards, some two foot square, and one foot high; and that square must be divided into two rooms, a greater room with open windowes of wire, through which the cony may feed; and a lesser room without light, in which the cony may lodge and kin dle, and before them both a trough in which you may put meat, and other necessities for the cony, and thus you may make box upon box in divers stories, keeping your Bucks by themselves, and your Does by themselves, except it be such Does as have not bred and then you may let a Buck lodge with them; also when your Doe hath kindled one nest, and then kindleth another, you shall take the first from her and put them together in a severall box, amongst rabbits of their own age provided that the box be not pestered, but that they have ease and liberty.

Of the choice
of rich conies.

Now for the choice of these tame rich conies you shall not as in another cattel, look to their shape, but to their richnesse, only elect your bucks, by the largest and goodliest conies you can get: and for the richnesse of the skin: that is accounted the richest, which hath the equallest mixture of black and white haire together, yet the black rather shadowing the white, then white any thing at all over-mastering the black, for a black skin with a few silver hairs is much richer then a white skin with a few black hairs: but as I said before, to have them equally or indifferently mixt, is the best of all other: the fur would be thick, deep, smooth, and shining, and a black coat without silver hairs, though it be not reckoned a rich coat, yet it is to be preferred before a white, a pyed, a yellow, a dun, or gray.

Now for the profit of these rich conies, (for unless they did far away and many degrees exceed the profit of all other conies they were not worthy the charge which must be bestowed upon them) it is this: First, every one of the rich conies which are killed in leason as from *Michaelmas* untill after *Candlemas*, is worth any five other conies, for they are of body much fatter and larger, and when another skin is worth two pence or three pence at the most, they are worth two shillings, or two shillings and sixpence: Again, they increase oftner, and bring forth more Rabbits at one kindling then any wild cony doth: they are ever ready at hand for the dish, winter and summer, without charge of Nets, Ferrets, or other Engines, and give their bodyes gratis for their skins will ever pay their Masters charge with a most large interest.

Now for the feeding and preservation of these rich conies, it is nothing so costly or troublesome as many have imagined, and as some ignorant in the skil of keeping them, have made the world think: for the best food you can feed a cony with, is the sweetest, shortest, softest, and best hay you can get, of which one load will serve two hundred couples a year, and out of the stock of two hundred, you may spend in your house two hundred, and sell in the market two hundred more, yet maintain the stock good, and answer every ordinary casualty. This hay in little cloven licks might with ease reach it and pull it out of the same, yet so as they may not scatter nor waste any. In the troughs under their boxes, you shall put sweet Oats and their water, and this should be their ordinary and constant food wherewith you shall feed your Conies, for all other should be used but Physically, as for the preservation of their health: as thus you shall do twice or thrice in a fortnight for the cooling of their bodyes, give them Greens, as Mallows, Claver-grass, Sower-docks, blades of corn cabbage, or colwort leaves, and such like, all which coolth and nourish exceedingly: some use to give them sometimes sweet grains, but that must be used seldome, for nothing sooner rotteth a Cony.

You must also have great care that when you cut any grass for them that are weeds, that there grow no young Hemlock amongst it, for though they will eat it with great greedinesse, yet it

is a peccant poyson, and kills suddainly, you must also have an especially care every day to make their boxes sweet and clean, for the strong savour of their ordure and piss is so violent, that it will both annoy themselves, and those which shall be frequent amongst them.

Of the Rot in
Conies.

Now for the infirmities which are incident unto them, they are but two : the first is rotnenness, which commeth by giving them too much green meat, or gathering their greens and giving it them with the dew on : therefore let them have it but seldome and then the dryness of the Hay will ever drink up the moysture, knit them and keep them sound without danger.

Of madness
in Conies.

The next is a certain rage of madness, ingendred by corrupt bloud, springing from the rankness of their keeping; and you shall know it by their wallowing and tumbling with their heels upward, and leaping in their boxes. The cure is, to give them *Hare-shfle* to eat, and it will heal them. And thus much of the tame rich cony, and his properties.

The end of the four footed Beasts.



The Second Book.

Of Poultry.

CHAP. I.

Containing the ordering, fasting, cramming, and curing of all infirmities of Poultry, as Cocks, Hens, Chickens, Capons, Geese, Turkeys, Pheasants, Partridges, Quails, House-doves, and all sorts of Fowl whatsoever. And first of the Daughill-Cock, Hen, Chickin, and Capon.



Some small thing hath been written of this nature before, but so drawn from the opinions of old writers as Italians, French, Dutch, and such like, that it hath no coherence or congruity with the practice and experience of English customs, both their

their Rules and climes being so different from ours, that except we were to live in their countryes, the rules which are printed are useles, and to no purpose. To let pass then the opinion of strangers, and come to our own home bred knowledge which is so mixed with all profitable experiments, that it needeth not the help of other Nations so much, as men would make us believe.

You shall understand that the Dunghill cock (for the fighting cock deserveth a much larger and particular discourse) is a soul of all other birds the most manlyest, stately, and majestically, very tame and familiar with the man, and naturally inclined to live and prosper in habitable Houses: he is hot and strong in the act of generation, and will serve ten Hens sufficiently; and some twelve and thirteen: he delighteth in open and liberrall plains, where hee may lead forth his Hens into green pastures and under hedges, where they may warm and bathe themselves in the Sun, for to be pend up in walled places, or in paved courts is most unnaturall unto them, neither will they prosper therein.

Now of the choyce and shape of the Dunghill cock, he would be of large and well sized body, long from the head to the Rump, and thick in the girth; his neck would be long, loose, and curiously bending it, and his body together, being straight and high up erected, as the Falcon and other birds of prey are; his comb, wattles, and throat would be large, of great compass, ragged, and very Scarlet red, his eyes round and great, the colour answering the colour of his plume or male, as gray with gray, red with red, or yellow with yellow, his bill will be crooked, sharp, and strongly set on to his head, the colour being suitable with the colour of feathers on his head, his main or neck feathers would be very long, bright, and shining, covering from his head to his shoulders, his leggs straight and of a strong beam, with large long spurs, sharp and a little bending, and the colour black, yellow, or brownish, his claws short, strong, and well wrinkled, his tayl long, and covering his body very closely, and for the general colour of the Dunghill cock it would be red, for that is medicinal, and oft used in cullisses and restoratives. This cock should be valiant within his own walk, and if he be a little

knavish, he is so much the better ; he would be oft crowing, and busie in scratching the earth to find out wormes and other food for his Hens.

Of the Hen
her choyce
and shape.

Now for the Hen, if she be a good one, she should not differ much from the nature of the Cock, but be valiant, vigilant, and laborious both for herself and her Chickens. In shape the biggest and largest are the best, every proportion answering those before described of the Cock, only instead of her comb she should have upon her crown a high thick tuft of feathers : to have many and strong claws is good, but to want hinder claws is better, for they oft break the eggs, and such Hens sometimes prove unnatural, it is not good to chuse a crowing Hen, for they are neither good breeders nor good layers. If you chuse Hens to sit, chuse the elder, for they be constant, and will sit out their times, and if you will chuse Hens to lay, chuse the youngest, for they are lusty and prone to the act of ingendring, but for neither purpose chuse a fat Hen, for if you set her, she will forsake her nest and if you keep her to lay, she will lay her eggs without shels. Besides, a fat Hen, will waxe sloathfull, and neither delight in the one, nor in the other Act of Nature, such hens then are fittest for the dish then the hen-house.

Of Setting
Hennes,

The best time to set Hens to have the best, largest, and most kindly Chickens, is in *February*, in the increase of the Moon, so that she may hatch or disclose her Chickens in the increase of the next new Moon ; being in *March*, for one brood of *March* Chickens is worth three broods of any other : you may set Hens from *March* till *October* : and have good Chickens, but not after by any means, for the Winter is a great enemy to their breeding. A Hen doth sit twenty one dayes just, and then hatcheth, but Pea-hens, Turkies, Geese, Ducks, and other water-fowl sit thirty : so that if you set your hen as you may doe upon any of their Eggs, you must set her upon them nine dayes before you set her upon her own. A Hen will cover nineteen Egges well, and that is the most in true rule, she should cover, but upon what number soever you set her, let it be odd, so the Egges will lye round, close, and in even proportion together : it is good when you lay your eggs first under your Hens, to mark the upper side of them and then to watch the Hen, to see if she busie her self to turn them from the

one

one side to the other, which if you find she doth not, then when she riseth from her eggs to feed or bath her self, you must supply that office, and turn every egge it self, and esteem your Hen of so much the less reckoning for the use of breeding : be sure that the Eggs which you lay under her, be new and sound which you may know by their heaviness, fulness, and cleereness, if you hold them up betwixt the Sun and your eye-sight ; you must by no means at any time raise your Hen from her nest, for that will make her utterly forsake it.

Now for helping a Hen to hatch her eggs, or doing that which should be her office, it is unnecessary, and shall be much better to be forborn then any way used ; or to make doubt of bringing forth, or to think the Hen sitteth too long, as many curious Huswives do. if you be sure you set her upon sound Eggs, is as frivolous : but if you set her upon unsound Eggs, then blame your self both of the loss and injury done unto the Hen in her loss of labour.

Choice of Eggs.

A Hen will be a good siter from the second year of her laying to the fifth, but hardly any longer ; you shall observe ever when your Hen riseth from her nest, to have meat and water ready for her, lest straying too far to seek her food she let her eggs cool too much, which is very hurtfull. In her absence you shall stir up the straw of her nest, and make it soft and handsome, and lay the eggs in order ; as she left them : do not in the election of your Eggs, chuse those which are monstrous great, for they many times have two yelks, and though some write, that such Eggs will bring out two Chickens, yet they are deceived ; for if they bring forth two, they are commonly most abortive and monstrous. to perfume the nest with brimstone is good, but with Rosemary much better. To set hens in the Winter time in Stows or Ovens is of course with us in England, and though they may by that means bring forth, yet will the Chickens be never good nor profitable but like the planting of Lemons, and Pomegranat-trees, the fruits will come a great deal short of the charges. When your Hen at any time is absent from her nest, you must have great care to see that the Cock come not to sit upon the Eggs, (as he will offer to do) for he will indanger to break them, and make her love her Nest worse.

Alsoon

Of Chickens.

As soon as your Chickens be hatch, if any be weaker than other, you shall lap them in Wool, and let them have the ayre of the fire, and it will strengthen them: to perfume them with a little Rosemary is very wholesome also; and thus you may in a sieve keep the first hatcht Chickens till the rest be disclosed, (for Chickens would have no meat for two dayes) and some such being harder than other, they will take so much distance of time in opening; yet unless the Chickens be weak, or the Hen rude, it is not amisse to let them alone under her, for she will nourish them most kindly: after two dayes is past, the first meat you give them should be very small Oatmeal, some dry, and some steeped in milk, or else fine wheat bread crums, and after they have got strength, then Curds; cheese parings, white bread crust soak'd in Milk or Drink, Barly meal, or Wheat bread scalded, or any such like soft meat that is small, and will easily be divided. It is good to keep Chickens, one fortnight in the house, and after to suffer them to go abroad with the Hen to Worme, for that is very wholesome to chop green Chives amongst your chickens meat will preserve them from the Rye, and other diseases in the head neither must you at any time let your chickens want water, for if they be forced to drink in puddle, it will breed the Pip: also to feed upon Tares, Darnel, or Cockel, is very dangerous for young chickens.

Of feeding
and cramming
Chickens.

You may by these foods aforesaid, feed chickens very fat under their dams: but if you will have fat crammed chickens, you shall coop them up when the Dam forsaketh them, and the best crams for them is wheatmeal and milk, made into dough, and then the crams steeped in milk, and so thrust down their throats: but in any case, let the crams be small, and well wet for choaking, fourteen dayes will feed a chicken sufficiently; and thus much briefly for your breed.

Of preserving
Eggs.

Now, because eggs of themselves are a singular profit, you shall understand, that the best way to preserve or keep them long, is, as some think, to lay them in good straw, and covey them close: but that is too cold, and besides will make them musty: others will lay them in bran, but that is too hot, and will make them putrifie; and others will lay them in salt, but that makes them waste and diminish: the best way then to keep them most sweet,

most

most found ; and most full, is only to keep them in a heap of old Malt, close and well covered all over.

You shall gather your egges up once a day, and leave in the nest but the nest egge, and no more ; and that would ever be in the after noon, when you have seen every Hen come from her nest *se* *Of gathering Eggs.* verally : some Hens will by their cackling tell you when they have laid, but some will lay mute ; therefore you must let your own eye be your instructor.

Now to ching the Capon, which is the guelt Cock-chicken *Of the Capon* you shall understand ; that the best time to carve or guelt, is as *when to carve* soon as the Dam hath left them, if the stones be come down, or *him.* else as soon as they begin to crow : for the art of carving it self, it is both easie and common, and much sooner to be learned by seeing one carved, then by any demonstration in writing.

These Capons are of two uses : the one is to lead Chickens *A Capon to lead Chickens,* Ducklings, young Turkeys, Pea-hens, Pheasants, and Partridges, which he will do altogether, both naturally and kindly, and through largeness of his body, will brood or cover easily thirty or five and thirty ; he will lead them forth so safely, and defend them against Kites or Buzzards, more and better then the Hens : therefore the way to make him to take unto them is, with a fine smal bryar, or else sharp nettles at night, to beat and sting all his breast and nether parts, and then in the dark to seat the chickens under him, whose warmth taketh away his smart ; he will fall much in love with them, and whensoever he proveth unkind, you must sting, or beat him again, and this will make him never forsake them.

The other use of Capons is, to feed for the dist, as either at the *Of feeding or cramming Capons.* Barn doors, with craps of corn, and the chavings of pulse, or else in pens in the house, by cramming them, which is the most dainty : the best way then to cram a Capon (setting all strange inventions apart) is to take Barley meal reasonably sifted, and mixing it with new milk, make it into a good stiff dough ; then make it into long crams, biggest in the midst, and small at both ends, and then wetting them in luke warm milk, give the Capon a full gorge thereof three times a day, Morning, Noon, and Night, and he will in a fortnight or three weeks, be as fat as any man need eat.

As

As for mixing their crams with sweet Wort, Hogs greafe, or Sallet oyl, they are by experience found to breed loath in the Birds, and not to feed at all : only keep this observation, not to give your capon new meat until the first be put over. And if you find your capon something hard of digestion ; then you shall shal sift your meal finer, for the finer your meal is, the sooner it will pass through their bodies. And thus much for the Capon Now for their infirmities, they follow in order.

CHAP. II.

Of the Pippe in Poultry.

The Cure.

THe Pippe is a white thin scale, growing on the tip of the tongue, and will make Poultry that they cannot feed : it is easie to be discerned, and proceedeth generally from drinking puddle water, from want of water, or from eating filthy meat. The cure is, to pul off the scale with your nayle, and then rub the tongue with salt.

CHAP. III.

Of the Roup in Poultry.

The Cure.

THe Roup is a filthy hyle or swelling on the Rump of Poultry, and will corrupt the whole body. It is ordinarily known by the staring and turning backward of the feathers : The cure is, to pull away the feathers, and open the sore, to thrust out the core, and then wash the place with salt and water, or with brine, and it helpeth.

CHAP. IV.

Of the Flux in Poultry.

The Cure.

THe Flux in poltry commeth with eating too much moist meat. The cure is, to give them pease bran scalded, and it will stay them.

CHAP. V.

Of stopping in the bellies.

Stopping in the bellies of poultry, is contrary to the flux, so that they cannot move : therefore you shal annoynt their Ventrals, and then give them either small bits of bread, or corne, steeped in mans urine.

CHAP. VI.

Of Lice in Poultry.

IF your Poultry be much troubled with Lice, as it is a common infirmity

infirmity, proceeding from corrupt food or want of bathing in sand, ashes, or such like : you shall take Pepper small beaten, and mixing it with warm water, wash your Poultry therein, and it will kill all sorts of vermine.

CHAP. VII.

Of stinging with venemous Worms.

IF your Poultry be stung with any venemous thing, as you may perceive by their lowring, and swelling, you shall then annoint them with Rew and Butter, mixt together, and it helpeth.

CHAP. VIII.

Of sore eyes in Poultry.

IF your Poultry have sore eyes, you shall take a leafe or two of ground-ivy, and chewing it well in your mouth, suck out the juice, and spit into the sore eye, and it will most assuredly heal it, as it hath been often tried.

CHAP. IX.

Of Hens that crow.

IF your Hens crow, which is an ill sign and unnaturall, you shall pull their wings, and give her to eat either Barley scorched, or small wheat, and keep her close from other Poultry.

CHAP. X.

Of Hens that eat their Eggs.

IF your Hen will eat her Eggs, you shall onely lay for her nest-egge a piece of chalk cut like an egge, at which of pecking, and losing her labour, she will refrain the evil.

CHAP. XI.

Of keeping a Hen from sing.

IF you would not have your Hen sit, you shall bathe her oft in cold water, and thrust a small feather through her nostrills.

CHAP. XII.

Of making Hens lay soon and oft.

IF you feed your Hens often with toasts taken out of Ale, with Barly boyld, or spelted fitches, they will lay soon, oft, and all the Winter.

CHAP. XIII.

Of making Hens lean.

BEcause fat Hens commonly either lay their egges without shels, or at the best hand lay very small egges; to keep them lean and in good plight for laying, you shall mixe both their meat and water with the powder of tileheards, chalk or else tears, twice or thrice a week.

CHAP. XIV.

Of the Crow-trodden.

IF your Hen be trodded with a carrion Crow, or Rook, as oft they are, it is morrall and incurable, and you shall know it by the staring up of her feathers, and hanging of her wings, ther is no way with her then, but presently to kill her.

CHAP. XV.

Of the Hen-house, and the situation.

NOW for as much as no Poultry can be keep either in health or safety abroad, but must of force bee housed, you shall understand that your Hen-house would be large and spacious, with somewhat a high roof, the walls strong, both to keep out theeves and vermine, the windows upon the Sun-rising, strongly lathed, and close shuts inward, round about the inside of the walls; upon the ground would be built large pens of three foot high for Geese, Ducks, and great fowl to sit in; neer to the eavings of the house would be long Peaches, reaching from one side of the house to the other, on which should sit your Cocks, Hens, Capons, and Turkies, each on severall Peaches, as they are disposed: at another side of the house, in that part which is darkest over the ground-pens, would be fixed hampers full of straw for nests, in which your Hens shall lay their egges, but when they sit to bring forth chickens, then let them sit on the ground, for otherwise it is dangerous: let there be pins stricken into the wall, so that your Poultry may clime to their Peaches with ease: let the floor by no means be paved, but of earth smooth and easie, let the smaller fowl have a hole at one end of the house, made to come in and out at, when they please, or else they will seek roost in other places; and for the greater Fowl the door may be opened evening and morning. This house should be placed either

either near some Kitchen, Brew-house, or else some Kiln, where it may have air of the fire, and be perfumed with smoak, which to Poultry is delightfull and wholsome. And thus much of the Cock, Hen, Capon, and Chicken.

CHAP. XVI.

Of Geese, their nature, choice, and how to breed them.

Geese, are a Fowl of great profit many waies, as first for food, next for their feathers, and lastly for their grease. They are held of Husbandmen to be fowl of two lives, because they live both on land and water; and therefore all men must understand that except he have either Ponds or Stream, he can never keep Geese well. They are so watchfull and carefull over themselves, that they will prevent most dangers: grasse also they must necessarily have, and the worst, and that which is the most uselesse is the best, as that which is morish, rotten, and unsavory, for cartell. To good grasse they are a great enemy, for their dung and treading will putrifie it, and make it then barren.

Now for the choice of Geese, the largest is the best, and the colour would be white or gray, all of one pair, for pidge are not so profitable, and black are worse: your Gander would be knavish and hardy, for hee will defend the Goslings the better.

The choice of Geese.

Now for the laying of Egges, a Goose beginning to lay in the Spring, and she that layeth earliest, is ever the best Goose, for she may have a second hatch. Geese will lay twelve, and some sixteen Egges, some will lay more, but it is seldome, and they cannot be all well covered; you shall know when your Goose will lay, by her carrying straw up and down in her mouth, and scattering it abroad: and you shall know when shee will sit, by her continuing on the nest till after she hath layd. You must set a Goose upon her own Egges, for she will hardly or unkindly sit on another Gooses Egges, as some imagine; but it is not ever certain: you shall in her straw when you set her, mixe nettle roots, for it is good for the Goslings: thirty dayes is the full time that a Goose sitteth, but if the weather be fair and warme, she will hatch three or four dayes sooner; ever when the Goose riseth from the Nest, you

Of laying Egges, and sitting.

The ordering of Goslings. shall give her meat, as skegge Oats, and Bran scalded, and give her leave to bathe in the water. After she hath hatcht her Goslings, you shall keep them in the house ten or twelve dayes, and feed them with Curds, scalded Chippings, or Barly meal in milk knodden and broken, also ground Malt is exceeding good, or any Bran that is scalded in water, milk, or tappings of drinke. After they have got a little strength, you may let them go abroad with a Keeper five or six hours in a day, and let the dam at her leisure dippe them in the water; then bring them in, and put them up, and thus order them, till they be able to defend themselves from vermine. After a Gosling is a month or six weeks old, you may put it up to feed for a green-Goese; and it will be perfectly fed in another month following: and to feed them, there is no meat better than skegge Oats boyld, and given plenty thereof thrice a day; Morning, Noon, and Night, with good store of milk, or milk and water mixt together to drinke.

Of green-Goese, & their fattening.

Of Gander.

Now you shall understand one Gander will serve well five Geese, and to have not above forty Geese in a flock is best, for to have more is both hurtful and troublesome.

Fattening of elder Geese.

Now for the fattening of elder Geese, which are those which are five or six months old, you shall understand that after they have been in the stubble fields, and during the time of Harvest got into good flesh, you shall then chuse out such Geese as you would feed, and put them in several pens which are close and dark, and there feed them thrice a day with good store of Oats, or spelted Beans, and give them to drinke water and Barley-meal mixt together, which must evermore stand before them, this will in three weeks feed a Goose so far as is needful.

Of gathering Geese feathers.

Now lastly, for the gathering of a Goose's feathers, you shall understand, that howsoever some Writers advise you for a needlesse profit to pull your Goose twice a year; March, and August: yet certainly it is very nought and ill; for first, by disabling the flight of the Goose, you make her subject to the cruelty of the Fox, and other ravenous beasts: and by uncloathing her in Winter you strik that cold into her body which kills her very suddenly: therefore it is best to stay till moulting time, or till you kill her, and then you may imploy all her feathers at your pleasure, either for beds, Fletchers, or Scriveners.

For

For the diseases and innmities in Geese, the most and worst they are subject unto, it is the *Gargill*, which is a mortall or deadly stopping of the head. And the ordinary and certain cure is, to take three or four cloves of Garlick, and beating them in a mortar with sweet butter, make little long balls thereof, and give two or three of them to the Goose fasting, and then shut her up for two hours after.

Of the
Gargill in
Geese.

The Cure.

CHAP. XVII.

Of Turkeys, their nature, &c, increase and breeding.

Turkeys, howsoever by some Writers they are held devourers of Corn, strayers abroad, ever pulling for meat, and many such like fained troubles, as if they were utterly unprofitable, yet it's certain, they are most delicate, either in past, or from the spit, and being fat far exceeding any other house-fowl whatsoever: nay, they are kept with more ease and less cost, for they will take more pains for their food than any other Bird, onely they are enemies to a garden, and from thence must ever be kept. They when they are young are very tender to bring up, both because, they are of a straying nature in themselves, and the Dams are so negligent, that whilst she hath one following her, she never respects the rest: therefore they must have a vigilant keeper or attend them, till they can sit fit for the selves, and then they will flock together, and seldom be parted. Till you fat them, you need not take care for food for them; they love to roost in trees or other high places.

Now for your choice of such as you would breed on; your Turkey Cock would not be above two years old at most, be sure that he be loving to the Chickens; and for your Hen, she will lay till she be five year old, and upward. Your Turkey Cock would be a Bird large, stout, proud and majesticall, for when he walkerh dejected, he is never good breeder.

Of the
choice of
the Turkey
Cock.

The Turkey Hen, if she be not prevented, will lay her egges in secret places, therefore you must watch her, and bring her to her Hen-house; and there compell her to lay. They begin to lay in March, and will sit in Aprill; and eleven Eggs, or thirteen, is the most they should cover: they hatch ever between five and twenty and thirty dayes. When they have hatcht their broods be sure

Of the
Turkey
Hen her
sitting.

to keep the Chicks warme, for the least cold kills them, and feed them either with Curds, or green fresh Cheefe cut in small pieces; let their drink be new milk, or milk and water: you must be careful to feed them oft; for the Turky-Hen will not like the House-Hen, call her chickens to feed them. When your Chicks have got strength, you shall feed them abroad in some close walled grass-plat, where they cannot stray, or else ever be at charge of a Keeper. The dew is most hurtful unto them, therefore you must house them at night, and let them abroad after Sun rise in the morning.

Of feeding
Turkies.

Now for the fattening of Turkies, sodden Barly is excellent, or sodden Oars for the first fortnight, and then for another fortnight cram them in all sorts, as you cram your Capon, and they will be fat beyond measure. Now for their infirmities, when they are at liberty, they are so good Physicians for themselves, that they will never trouble their owners, but being cooped up; you must cure them as is before described for Pullen. Their Eggs are exceeding wholesome to eat, and restore nature decayed wonderfully.

CHAP. XVIII.

Of the Duck, and such Water Fowls.

THe same Duck is an exceeding necessary fowl for the Husbandmans yard, for she asketh no charge in keeping, but li- veth of corn lost or other things of lesse profit. She is once in year a very great layer of Eggs; and when she sitteth she craveth both attendance and feeding; for being restrained from seeking her food, she must be helped with a little barly or other orchaving of corn, such as else you would give unto Swine: as for her sitting, hatching, and feeding of her Ducklings it is in all poynts to be observed in such manner as you did before with the Goose, onely after they are abroad they will shift better for their food than Gallings will. For the fattening of Ducks or Ducklings, you may do it in three weeks, by giving them any kind of Pulse or Grain, and good store of water.

Of Wild-
Duck, and
their or-
dering.

If you will preserve Wild-Ducks, you must wall in a little piece of ground, in which is some little pond or spring, and cover the top of it all over with a strong net: the pond must be lined with many tufts of Oziers, and have many secret holes, and creeks

cock, for that will make them delight and feed though imprisoned. The wild-duck when she layeth, will steal from the Drake and hide her nest, for he else will suck the Eggs. When she hath hatcht she is most careful to nourish them, and needeth no attendance more than meat, which would be given fresh, twice a day, as scalded Bran, Oats or Fitches. The house-hen will hatch wild-Ducks eggs, and the meat will be much the better, yet every time they go into the water, they are in danger of the Kite, because the hen cannot guard them. In the same manner as you nourish wild-Ducks, so you may nourish Teils, Widgeons, Shel-drakes or green Plovers.

CHAP. XIX.

Of Swans, and their feeding.

TO speak of the breeding of Swans is needlesse, because they can better order themselves in that business than any Man can direct them, onely where they build their nests, you shall suffer them to remain undisturbed, and it will be sufficient: but for the feeding them fat for the dish; you shall feed your Cygners in all sorts as you feed your Geese, and they will be through fat in seven or eight weeks, either croopt in the house, or else walking abroad in some private court; but if you would have them fat in shorter space, then you shall feed them in some pond, hedg'd or pal'd in for that purpose, having a little dry ground left, where they may sit and prune themselves; and you may place two troughs, one full of Barly and water, the other full of old dried Malt, on which they may feed at their pleasure; and thus doing they will be fat in lesse than four weeks: for by this means a Swan keepeth himselfe neat and clean, who being a much defiled Bird, liverh in dry places so uncleanly, that they cannot prosper, unlesse his attender be diligent to dresse and trim his walk every hour.

CHAP. XX.

Of Peacocks, and Peahens, their increase, and ordering.

PEACOCKS, howsoever our old writers are pleased to deceive themselves in their praises, are birds more to delight the eye
by

by looking on them, than for a particular profit; the best commodity arising from them, being the cleaning and keeping of the yard free from venomous things, as Toads, Newts, and such like, which is their daily food; whence it comes, that their flesh is very unwholesome, and used in great banquets more for the ratanelle than the nourishment, for it is most certain, roast a Peacock or Peahen never so dry, then set it up, and look on it the next day, and it will be bloud raw, as if it had not been roasted at all.

The Peahen loves to lay her eggs abroad in bushes and hedges, where the Cock may not find them, for if he do, he will break them; therefore as soon as she begins to lay, separate her from the Cock and house her till she have brought forth her young, and that the cronet of feathers begin to rise at their foreheads, and then turn them abroad, and the Cock will love them, but not before. A Peahen sits just thirty dayes, and in her sitting, any grain, with water, is food good enough: before your Chickens go abroad, you shall feed them with fresh green Cheese, and Barley-meal, with water, but after they go abroad, the Dam will provide for them. The best time to set a Peahen is, at the beginning of the Moon, and if you set Hens eggs amongst her eggs, she will nourish both equally. The Pea-chickens are very tender, and the least cold doth kill them, therefore you must have care to keep them warm, and not to let them goe abroad but when the Sun shinerh. Now for the feeding of them, it is a labour you may well save, for if they go in a place where there is any corn stirring, they will have parr, and being meat which is seldom or never eaten, it mattereth not so much for their fattening.

CHAP. XXI.

Of the tame Pidgeon, or rough footed.

THe tame rough-footed Pidgeon differs not much from the wild Pidgeon, onely they are somewhat bigger, and more familiar, apt to be tame; they commonly bring not forth above one pair of Pidgeons at a time, and those which are the least of body are ever the best breeders, they must have their rooms and boxes made clean once a week, for they delight much in neat-
ness

nettle; and if the walls be outwardly whited or painted, they love it the better, for they delight much in fair buildings. They will bring forth their young ones once a moneth, if they be well fed, and after they be well pair'd they will never be divided. The Cock is a very loving and natural bird, both to his Hen and the young ones, and will sit the Eggs while the Hen feedeth, as the Hen sits whilst he feedeth: he will also feed the young with as much painfulness as the Dam doth, and is best pleased when he is brooding them. These kind of Pidgeons you shall feed with white Pease, Tares, and good store of clean water. In the room where they lodge you shall ever have a salt Cat for them to pick on, and that which is gathered from Salt-peter is the best: also they would have a good store of dry Sand, Gravel, and Pybble, to bathe and cleanse themselves withall, and above all things great care taken, that no Vermin, or other Birds come into their boxes, especially Sterlings, and such like, which are great Egg-suckers. And thus much of the tame Pidgeon.

CHAP. XXII.

Of nourishing and fasting, Hearn, Puet, Gull, and Bitter.

Hearnes are nourished for two causes: either for Princes sports to make trains for the entring their Hawks, or else to furnish on the Table at great Feasts: the manner of bringing them up with the least charge, is to take them out of their Nests before they can flye, and put them into a large high Barn, where there is many high and crosse beams for them to perch on: then to have on the floor divers square boards with rings in them, and between every board which would be two yards square, to lace round shallow tubs full of water; then to the boards you shall tie great gobbers of Dogs flesh, cut from the bones, according to the number which you feed: and be sure to keep the house sweet, and shift the water oft, only the house must be made so that it may rain in now and then, in which the Hearn will take much delight. But if you feed her for the dish, then you shall feed them with Livers, and the intrails of Beasts, and such like, cut in great gobbers; and this manner of feeding will also feed either Gull, Puet, or Bitter: but the Bitter is ever best to be fed by the hand, because when you have fed him, you must tie his beak together; or he will cast up his meat again.

CHAP. XXIII.

Of feeding the Partridge, Pheasant, and Quail.

THese three are the most dainciell of all Birds, and for the Pheasant or Partridge, you may feed them both in one room where you may have little boxes where they may run and hide themselves in divers corners of the room; then in the midst you shall have three wheat sheaves, two with their ears upward, and one with the ears downward, and near unto them shallow tubs with water, that the fowl may peck wheat out of the ears, and drink at their pleasures, and by this manner of feeding, you shall have them as fat as is possible; as for your Quales, the best feeding them is in long flat shallow boxes, each box able to hold two or three dozen, the foremost side being set with round pins so thick that the Quail do no more but put out her head, then, before that open side, shall stand one through full of small chilter-wheat, another with water, and thus in one fortnight, or three weeks you shall have them exceeding fat.

CHAP. XXIV.

Of Godwits, Knots, Gray-plover, or Curlews.

FOR to feed any of these Fowls which are esteemed of all other the dainciell and dearest, fine Chilter-wheat, and water given them thrice a day, Morning, Noon, and Night, will do it very effectually; but if you intend to have them extraordinary and crammed fowl, then you shall take the finest drest wheat-meal, and mixing it with Milk, make it into paste, and ever as you knead it, sprinkle into it the grains of small Chilter wheat, till the paste be fully mixt therewith; then make little small crams thereof, and dipping them in water give to every fowl according to his bignesse, and that his gorge be well filled: do thus as oft as you shall find their gorges empty, and in one fortnight they will be fed beyond measure, and with these crams you may feed any fowl of what kind or nature soever.

CHAP. XXV.

Of feeding Black-birds, Thrushes, Felfares, or any small Birds what soever.

TO feed these Birds, being taken old and wild, it is good to have some of their kinds tame to mix among them, and then putting

ring them into great cages of three or four yards square, to have divers troughs placed therein, some filled with Haws, some with Hempseed, and some with water, that the tame teaching the wild to eat, and the wild finding such change and alteration of food, they will in twelve or fourteen dayes grow exceeding fat, and fit for the use of the Kitchen.

The end of the Poultry.



OF HAWKS.

CHAP. I.

Of the general Cures for all Diseases and Infirmities in Hawks, whether they be short winged Hawks, or long winged Hawks, and first of Castings.

Hawks are divided into two kinds, that is to say, short winged Hawks, as the Goshawk, and her Tercell, the Sparrow-hawk and her Musket, and such like, whose wings are shorter then their trains, and do belong to the O-inger; and long winged Hawks, as the Faulcon gentle, and her Tercell, the Gerfaulcon and Jerkin, the Lanner, Merlin, Hobby, and divers others. Now forasmuch as their infirmities for the most part, proceed from the discretion of their Governors; if they flye them out of season before they be intamed, and have the fat, glut, and filthinesse of their bodies scoured and clenfed out; I think it not amisse first to speak of Hawks castings; which are the naturallest and gentlest purges, or scourings a Hawk can take, and doth the least offend the vitall parts. Therefore, you shall know, that all Ostingers do esteem plumes, and the soft feathers of small birds, with some part of the skin to be the best casting a short winged Hawk can take; and for the purging of her head, to make her tye much upon

sheeps Rumps, the fat cut away, and the bones well covered with parsley. But for long winged Hawks, the best casting is fine Flannel, cut into square pieces of an inch and half square and all to be jagged, and so given with a little bit of meat. By these castings you shall know the soundnesse and unsoundnesse of your Hawk: for when she hath cast, you shall take up the casting, which will be like a hard round peller, somewhat long; and presse it between your fingers, and if you find nothing but clear water come from it, then it is a sign your Hawk is well and lusty; if there come from it a yellowish filthy matter, or if it stink, it is a sign of rottennesse and disease; but if it be greazie or slimy on the one side, then it is a sign the Hawk is full of grease inwardly, which is not broken nor dissolved: and then you shall give her a scouring, which is a much stronger purgation; and of scourings the gentlest, next casting is to take four or five pellets of the yellow root of Selladine well cleansed from filth, being as big as great pease, and give them out of the water early in the morning when the Hawk is fasting, and it will cleanse her mightily.

If you take the pellets of Selladine, and give them out of the Oyl of Roses, or out of the sirrup of Roses, it is a most excellent scouring also, onely it will for an hour or two make the Hawk somewhat sickish. If you give your Hawk a little *Aloes Cicutine*, as much as a bean wrapt up in her meat, it is a most sovereign scouring, and both not only avoid grease, but also killeth all sorts of Worms whatsoever.

If your Hawk by over-flying, or too soon flying, be heated and inflamed in her body, as they are much subject thereunto: you shall then to cool their bodies, give them stones: These stones are very fine white pibbles, lying in the Sands of gravelly Rivers, the bignesse whereof you may choose according to the bignesse of your Hawk, as some no bigger then a Bean, and those be for Merlyns or Hobbies; some as big as two Beans, and they are for Faulcons gentle, Lanners, and such like; and some much bigger then they, which are for Gerfaulcons: or such like. And these stones if they be full of crefts and welts, they are the better, for the roughest stone is the best; so it be smooth and not greety. And you shall understand, that stones are most proper for long-wing'd Hawks, and the number which you shall give at the most

mult never exceed fifteen, for seven is a good number, so is nine or eleven, according as you find the Hawks heat more or lesse, and these stones must ever be given out of fair water, being before very well pickt and trim'd from all dirt and filthinesse. And thus much of Hawks castings, scourings, and stones.

CHAP. II.

Of Impostumes in Hawkes.

If your Hawk have any impostume rising from her, which is apparent to be seen, you shall take sweet raisins, and boyl them in Wine, and then crushing them, lay them warm to the sore, and it will both ripen and heal it: onely it shall be good to scoure your Hawk very well inwardly, for that will abate the flux of all evil humours;

CHAP. III.

Of all sorts of sore eyes.

For any sore eye, there is nothing better then to take the juyce of ground Ivy, and drop it into the Eye. But if any Web be grown before you use this Medicine, then you shall take Ginger finely sear'd, and blow it into the Eye, and it will break the Web, then use the juyce of Ivy, and it will wear it away.

CHAP. IV.

Of the Pantas in Hawkes.

The Pantas is a stooping, or shortnesse of wind in Hawks, and the cure is, to give her the scowring of Selladine, and the oyl of Roses, and then to wash her meat in the decoction of Coltsfoot, and it will help her.

CHAP. V.

Of casting the Gorge.

This is when a Hawk, either through meat which she cannot digest, or through surfeit in feeding, casteth up the meat which she hath eaten, which is most dangerous. And the onely way to cure her, is to keep her fasting, and to feed her with a very little at once of warm bloody meat, as not above half a Sparrow at a time, and be sure never to feed her again, till she have indued the first.

CHAP. VI.

Of all sorts of Worms, or Flylanders in Hawks.

Worms or Flylanders, which are a kind of Worms in Hawks, are either inward or outward: inward, as in the guts or intrails; or outward, as in any joynt or member: if they be inward, the scouring of Aloes is excellent to kill them; but if they be outward, then you shall bathe the place with the juyce of the Herb *Ameos* mixt with *Hony*.

CHAP. VII.

Of all swelling in Hawks feet, and of the pin in the foot.

For the pin in the sole of the Hawks foot: or for any swelling up in the foot, whether it be soft or hard, there is not any thing more soveraign, then to bathe it in *Patch-grease* moulten, and applied to, exceeding hot; and then to fold a fine Cambrick rag dip in the same grease about the sore.

CHAP. VIII.

Of the breaking of a Pounce.

This is a very dangerous hurt in Hawks, especially in *Gerfaulcons*; for if you break or rive her pounce, or but coape it so short that she bleed though it be very little, yet it will indanger her life: the cure thefore is presently upon the hurt, with a hot wyar so fear it, till the blond staunch, and then to drop about it pitch of Burgundy, and wax mixt together, or for want thereof, a little hard Merchants wax, and that will both heal it, and make the Pounce grow.

CHAP. IX.

Of bones broken, or out of joynt.

IF your Hawk have any bone broken or misplaced, you shall after you have set it, bathe it with the Oyl of *Mandrake* and *Swallows*, mixt together, and then splent it, and in nine dayes it will be knit and have gotten strength.

CHAP.

CHAP. X.

Of inward bruifings in Hawks.

IF your Hawk either by stooping amongst Trees, or by the encounter of some fowl, get any inward bruife, which you shall know by the blacknesse, or blondinesse of their mutes; you shall then annoynt her meat every time you feed her, with *Sperma-Cæte*, till her mutes be clear again, and let her meat be warm and bloody.

CHAP. XI.

Of killing of Lice.

IF your Haw be troubled with Lice, which is a general infirmity, and apparent, for you shall see them creep all over on the outside of her feathers if she stand but in the aire of the fire. You shall bathe her all over in warm water and Pepper small beaten, but be sure that the water be not too hot; for that is dangerous; neither that it touch her eyes.

CHAP. XII.

Of the Rye in Hawks.

THIS disease of the Rye in Hawks proceedeth from two causes; the one is cold and poze in the head, the other is foul and most uncleanly feeding, the Faulconer being negligent to seek and cleanse his Hawks beak and nares, but suffering the blond and filthinesse of meat to stick and cleave thereunto. For indeed, the infirmity is nothing else but a stopping up of the nares: by means whereof, the Hawk not being able to cast and avoid the corruption of her head, it turns to putrification, and in short space kills the Hawk: and this disease is a great deal more incident to a short winged Hawks then to long. The signs whereof are apparent by the stopping of the nares. The cure is to let your Hawk tyre much upon sinewy and bony meat, as the rumps of Mutton (the fat being taken away) or the pinions of the wings of fowl, either being well lapt in a good handful of Parsley, and forcing her to strain hard in the tearing of the same, and with much diligence to cleanse and wash her beak clean with water after her feeding, especially if her meat were warm and bloody.

CHAP.

CHAP. XIII.

Of the Frounce.

THe Frounce is a Cankerous Ulcer in a Hawks mouth, gotten by over-flying, or other inflammation proceeding from the inward parts; foul and unclean food is also a great ingenderer of this disease. The signs are a forenesse in the Hawks mouth, which fore will be furr'd and cover'd over with white scurf, or such like filthinesse; also if the Ulcer be deep and ill, the Hawk will wind and turn her head awry, making her beak stand upright; and the cure is to take Allom, and having beaten it to fine powder, mix it with strong Wine-vinegar, till it be somewhat thick, and then wash and rub the sore therewith till it be raw, and that the scurf be clean taken away. Then take the juyce of *Lailiam*, and the juyce of *Radish*, and mixing it with Salt, annoint the sore therewith, and in few dayes it will cure it.

CHAP. XIV.

Of the Rhume.

THe Rhume is a continual running, or dropping at the Hawks nares, proceeding from a general cold, or else from over-flying, and then a sudden cold taken thereupon; it stoppeth the head and breeds much corruption therein, and the signs are the dropping before-said, and a general heavinesse, and sometimes a swelling of the head. The cure is, to take the juyce of *Beets*, and squirt it oft into the Hawks nares. Then when you feed her, wash her meat in the juyce of *Broomwors*, and it will quickly purge, and set her sound.

CHAP. XV.

Of the Fornicat in Hawkes.

THe Fornicat in Hawkes is a hard horn growing upon the back of a Hawk, ingendred by a poysonous and Cankerous Worm; which fretting the skin and tender yellow welt between the beed and the beak, occasioneth that hard horn, or excreffion to grow and offend the bird: the signe is the apparant sight of the horn, and the cure is, to take a little of a Bulls Gall, and beating it with Aloes, annoynt the Hawkes beak therewith morning

and evening, and it will in very few dayes take the horn away.

CHAP. XVI.

Of the Fistula in Hawks.

THe Fistula in hawks is a cankerous hollow Ulcer in any part of a hawks body, as it is in men, beasts, or any other creature: the signs are, a continual mattering, or running of the sore, and a thin sharp water like lie, which as it falls from the same, will fret the sound parts as it goeth. The cure is, with a fine small wiar, little stronger then a virginal-wiar, and wrapt close about with a soft fleaved silk, and the point blunt and soft, to search the hollownesse and crookednesse of the ulcer, which the pliantnesse of the wiar will easily doe; and then having found out the bottom thereof, draw forth the wiar, and according to the bignesse of the Orifice, make a tent of fine lint being wet, which may likewise bend as the wiar did, and be within a very little as long as the ulcer is deep. For to tent it to the full length is ill, and will rather increase then diminish the Fistula, and therefore ever as the Fistula heals, you must take the tent shorter and shorter. But to the purpose, when you have made your tent fit, you shall first take strong A'lom-water; and with a small Syringe squirt the sore three or four times therewith, for that will cleanse, dry, and scour every hollownesse in the ulcer: then take the tent and annoint it with the juice of the hearb *R bet*, Vinegar, and *Ailom* mixt together, and it will dry up the sore.

The Cure.

CHAP. XVII.

Of the privy evill in Hawks.

THe privy evill in hawks is a secret heart-sicknesse, procured either by over-flying, corrupt food, cold or other disorderly keeping; but most especially for want of stones or casting in the due season: the signs are, heavinesse of head, and countenance, evill ending of her meat, and foul black mutings. The cure is, to take morning and evening a good piece of a warm shixps heart, and stamping it either in new Asses milk, or new Goats milk, or for want of both, the new milk of a red Cow, with the same to feed your hawk, till you see her strength and lust recovered.

C H A P. XVIII.

Of wounds in Hawks.

HAwks by the crosses incounters of souls especially the Heron, by stooping amongst bushes, thorns, trees, and by divers such accidents, do many times catch sores and most grievous wounds, the signs whereof are the outward apparence of the same. And the cure is if they be long and deep, and in place that you may conveniently, first to stitch them up, and then to raine them up with a little ordinary Balsamum, and it is a present remedy. But if it be in such a place as you cannot come to stitch it up, you shall then only take a little lint, and dip it in the juice of the hearb called *Mouf-ar*, and apply it to the sore, and it will in short space heal it. But if it be in such a place as you can by no means bind any thing thereunto, you shall then only annoint or bathe the place with the aforesaid juice, and it will heal and dry up the same in very short time; the juice of the green hearb called with us, *English Tobacco*, will likewise do the same: for it hath a very speedy course in healing and cleansing, as hath been approved by diuers of the best Faulconers of this Kingdome, and other nations.

CHAP. XIX.

Of the Apoplexie, or falling euill in Hawks.

THe Apoplexy, or falling euill in hawks is a certain Vertigo or dizziness in the brain, proceeding from the oppression of cold humours which do for a certain space numb, and as it were mortifie the senses: the signs are, a sudden turning up the hawks head, and falling from her perch without bating, but only with a general trembling over all the body, and lying so, as it were in a trance a little space; she presently recovereth, and riseth up again, but is sick and heavy many hours after. The cure therefore is, to gather the hearb *Asterion* when the Moon is in the Wain, and in the sign Virgo, and taking the juice thereof to wash your hawks meat therein, and to feed her, and it hath been found a most sovereign medecine.

The Cure.

CHAP.

CHAP. XX.

Of the purging of Hawks.

THere is nothing more needfull to hawks then purgation, and cleansings; for they are much subject to fat and foulness of body inwardly, and their exercise being much and violent, if there be neglect, and that their glut be not taken away, it will breed sicknesse and death; therefore it is the part of every skilful Faulconer, to understand how, and when, to purge his hawk, which is generally ever before she be brought to flying, and the most usuallest season for the same, is before the beginning of Autumne, for commonly knowing Gentlemen will not flye at the Partridge, till corn be from the ground; and if he prepare for the River early, he will likewise begin with that season: the best purgation then, that you can give your hawk is, *Aloes Cicatrine* wrapt up in warm meat, the quantity of a French pease, and so given the hawk to eat ever the next morning after she hath flown at any train or taken other exercise, whereby she may break or dissolve the grease within her.

CHAP. XXI.

For a Hawk that cannot mute.

IF your hawk cannot mute, as it is a common infirmity which happeneth unto them, you shall take the lean of pork, being newly kild, whilst it is warm, to the quantity of two Walnuts, and lapping a little *Aloes* therein, give it the hawk to eat, and it will presently help her. There be divers good Faulconers in this case, which will take the roots of Selandine, and having cleansed it, and cut it into little square pieces, as big as pease, steep it in the oyl of Roses, and so make the hawk swallow down three or four of them, and sure this is very good and wholesome, only it will make the hawk exceeding sick for two or three hours after. Neither must the hawk be in any weak state of body, when this latter medicine is given her. Also, you must observe to keep your hawk at those times exceeding warm, and much on your fist, and to feed her most with warm birds, least otherwise you clog and dry up her entrails too much, which is both dangerous and mortall.

CHAP. XXII.

The assured sign to know when a Hawk is sick.

HAWKS are generally of such a stout, strong, and unyielding nature, that they will many times cover and conceal their sicknesses so long, till they be grown to that extremity, that no help of Physick, or other knowledge can avails for their safety: for when the countenance, or decay of stomach, which are the ordinary outward faces of infirmities appear, then commonly is the disease past remedy. Therefore to prevent that evill, and to know sickness whilst it may be cured, you shall take your hawk, and turning up her train, if you see that her uel or fundament either twelleth or looketh red, or if her eyes or ears likewise be of a fiery complexion, it is a most infallible sign that the hawk is sick, and much out of temper.

CHAP. XXIII.

Of the Feaver in Hawks.

HAWKS are as much subject to Feavers, as any creatures whatsoever, and for the most part they proceed from over-flying, or other extraordinary heats, mixt with sudden colds, given them by the negligence of unskilful keepers. And the cure is, to set her in a cool place, upon a perch, wrapt about with her cloaths, and feed her oft with a little at a time of chickens fish steeped in water, wherein hath been soaked Cucumber-seeds. But if you find by the stopping of her ears or head, that she is offended more with cold then heat, then you shall set her in a warm place, and feed her with the bloody fish of pigeons, washt either in white-wine, or in water, wherein hath been boyled either Sage, Marjoram, or Camomill.

The Cure.

CHAP. XXIV.

To help a Hawk that cannot digest her meat.

IF your Hawk be hard of digestion, and neither can turn it over, nor empty her panel, which is very often seen, you shall then take the heart of a Frog, and thrust it down into her throat, and pull it back again by a thread fastned thereunto once or twice suddenly, and it will make her cast her gorge presently.

CHAP.

CHAP. XXV.

Of the Gout in Hawks.

HAwks, especially those which are free and strong strikers, are infinitely subject to the Gout, which is a swelling, knotting, and contracting of a Hawks feet: The cure thereof is, to take The Cure. two or three drops of blood from her thigh-vein, a little above her knee, and then annoint her feet with the juyce of the hearb Hollihock, and let all her pearch be annointed also with tallow, and the juyce of that hearb mixt together. Now if this disease, (as oft it hapneth) be in a Hawks wing, then you shall take two or three drops of blood from the vein under her wing, and then annoint the pinions and inside thereof, with *Unguentum de Althea* made very warm, which you may buy of every Apothecary.

CHAP. XXVI.

Of the stanching of blood.

IT is a known experience amongst the best Faulconers, that if the Gerfaulcon shall but lose two or three drops of blood it is mortal, and the hawk will die suddenly after; which to prevent, if the blood proceed from any wound, which is most ordinary, then upon the instant hurt, you shall take a little hard Merchants wax, and drop it upon the sore, and it will presently stop it; if it be upon any other part of the hawks body, you shall clap thereunto a little of the soft down of a Hare, and it will immediately stanch it; without these two things, a good Faulconer should never go, for they are to be used in a moment. And thus much of the hawk and her diseases.

Of Bees.

CHAP. I.

Of the nature, ordering, and preservation of Bees.

OF all the creatures which are behoveful for the use of man, there is nothing more necessary, wholesome, or more profitable, then the Bee: nor any lesse troublesome, or lesse chargeable. To speak first of the nature of Bees, it is The nature of
a Bees.

a creature gentle, loving and familiar about the man, which hath the ordering of them, so he come neat, sweet and cleanly amongst them, otherwise if he have strong, and ill smelling favours about him, they are curst and malicious, and will sting spitefully, they are exceeding industrious and much given to labour, they have a kind of government amongst themselves, as it were a well-ordered Common-wealth, every one obeying and following their King or Commander. whose voice (if you lay your ear to the hive) you shall distinguish from the rest, being louder and greater, and beating with a more solemn measure. They delight to live amongst the sweetest herbs, and flowers, that may be, especially Fennel, and wall Gilly-flowers, and therefore their best dwellings are in gardens: and in these gardens, or neer adjoining thereunto, would be divers fruit trees growing, chiefly plum-trees, or peach-trees; in which, when they cast, they may knit, without taking any far flight, or wandring to find out their rest: this garden also would be well fenced, that no Swine nor other Cattell may come therein, as well for overthrowing their hives, as also for offending them with other ill favours. They are also very tender, and may by no means indure any cold; wherefore you must have a great respect to have their houses exceeding warm, close, and tight, both to keep out the frost and snow, as also the wet and rain; which if it once enter into the hive, it is a present destruction.

Of the Bee
hive.

To speak then of the Bee-hive, you shall know there be divers opinions touching the same, according to the custmes and natures of Countries; for in the champion Countries, where there is very little store of woods, they make their Hives of long Rye straw, the rousls being sowed together with bryers; and these hives are large and deep, and even proportion'd like a Sugar-loafe and crosse-bar'd within, with flat splints of wood, both above and under the midst part. In other champion Countries where they want Rye straw, they make them of Wheat straw, as in the West Countries, and these hives are of a large compasse, but very low and flat, which is naught, for a hive is better for his largeness, and keepeth out the rain best when it is sharpest. In the wood Countries, they make them of cloven hasels, watteld about, broad splints of ash, and so formed, as before I said, like a Sugar-loafe.

And

And these hives are of all other the best, so they be large and smooth within, for the straw hive is subject to breed mice, and nothing destroyeth Bees sooner then they, yet you must be governed by your ability, and such things as the soyl affords.

Now for the Wood-hive which is the best, you shall thus trim-
 Of the trim-
 and prepare it for your Bees: you shall first make a stiff mortar ming of the
 of lime and Cow dung, mixed together; and then having cross Hive.
 barred the hive within, daub the out-side of the hive with the
 mortar, at least three inches thick, down close unto the stone; so
 that the least air may not come in: then taking a Rye-sheaf, or
 Wheat-sheaf, or two that is baled, and not thrashed, and chu-
 sing out the longest straws, bind the ears together in one lump,
 put it over the hive, and so as it were thatch it all over, and fixe
 it close to the hive with an old hoop, and this will keep the hive
 inwardly as warm as may be: also, before you lodge any Bee in
 your hive, you shall perfume it with Juniper, and rub it all within
 with Fennell, Isop, and Time-flowers; and also the stone upon which
 the hive shall stand.

Now for the placing of your hive, you shall take three long thick
 The placing
 stakes, cut smooth and plain upon the heads, and drive them into
 of hives
 the earth triangular wise, so that they may be about two foot a-
 bove the ground: then lay over them a broad smooth paving stone,
 which may extend every way over the stakes above half a foot: and
 upon the stone set your hive, being lesse in compass then the stone by
 more then six inches every way; and see the door of your hive stand
 directly upon the rising of the morning Sun, inclining a little unto
 the Southward: and be sure to have your hives well sheltered from
 the North winds, and generally from all tempestuous weather: for
 which purpose if you have sheads to draw over them in the winter,
 it is so much the better. And you shall place your hives, in orderly
 rows one before another, keeping clean allies between them every
 way, so as you may walk and view each by it self severally.

Now for the casting of your Bees, it is earlier or latter in the
 year, according to the strength and goodness of the Stock, or the
 warmth of the weather. The usuall time for casting, is from the
 beginning of May, till the middle of July: and in all that time
 you must have a vigilant eye, or else some servant to watch their
 rising, lest they fly away, and knit in some obscure place far
 from

from your knowledge: yet if you please, you may know which hives are ready to cast a night before they do cast, by laying your ear after the Sun-set to the hive, and if you hear the Master Bee above all the rest, in a higher and more solemn note, or if you see them lye forth upon the stone, and cannot get into the hive, then be sure that stock will cast within few hours after.

As soon as you can perceive the swarm to rise and are got up into the ayre (which will commonly be in the height and heat of the Sun) you shall take a brasse Basin, Pan, or Candlestick, and make a tinkling noise thereupon, for they are so delighted with musick, that by the sound thereof they will presently knit upon some branch or bough of a tree. Then when they are all upon one cluster, you shall take a new sweet hive well drest, and rubb'd with Hony and Fennel, and shake them all into the hive; then having spread a fair sheet upon the ground, set the hive thereon, and cover it all clean over close with the sheet, and so let it stand till after Sun-set; at which time the Bees being gathered up to the top of the hive (as their nature is) you shall let them upon the stone having rubb'd it with Fennel; and then daub it close round about with lime and dung mixt together, and only leave them a door or two to issue out and in at. There be some stocks, which will cast twice or thrice, and four times in a year; but it is not good, for it will weaken the stock too much; therefore to keep your stocks in strength and goodnesse, it is not good to suffer any to cast above twice at the most.

Again, you shall with pieces of brick or other smooth stoness, raise the stock in the night, three or four inches above the stone, and then daub it close again, and the Bees finding house-room, will fall to work within and not cast at all; and then will their stocks be worth two others: and in the same manner, if you had the year before any small swarms; which are likely to cast this year, or if you have any early swarms this year, which are likely to cast at the latter end of the year: both which are often found to be the destruction of the stocks: in either of these cases, you shall enlarge the hive, as it is before said, by raising it up from the stone, and it will not only keep them from casting, but make the stock better, and of much more profit; for that live which is of the most weight, is of the best price.

Now when you have mark't out those old Stocks, which you intend to sell (*for the oldest is finest for that purpose*) you shall know that the best time to take them is at Michaelmas, before any frosts hinder their labour: and you shall take them ever from the stone in the dark of night, when the aire is cold, and either drown them in water, or smother them with Fusbals; for to chase them from their Hives as some do, is naught, because all such Bees as are thus frightened from their Hives, do turn robbers; and spoyle other stocks because that time of the year will not suffer them to labour, and get their own livings.

Now if you have any weak Swarms which coming late in the year cannot gather sufficient of Winter provision; in this case you shall feed such stocks by dayly smearing the stone before the place of their going in and out, with Hony and Rose-water mixt together, and so you shall continue to do all the strength of Winter, till the warmth of the Spring, and the Sun-shine bring forth store of flowers for them to labour on. You shall continually look that no Mice, and such like Vermine breed about Hives, for they are poytonous, and will make Bees forsake their Hives.

Now lastly, if any of your stocks happen to dye in the Winter (as amongst many, some must quail) you shall not by any means stir the stock, but let it remain till the Spring, that when you see your Bees begin to grow busie: then take up the dead stock, and trim it clean from all filth, but by no means stir, or crush any of the Combs, then dash the Combs, and besprinkle them, and besmear all the inside of the Hive with Hony, Rose-water, and the juyce of Fennel mixt together, and daub also the stone therewith. Also then set down the Hive again, and daub it as if it had never been stirred, and be well assured, that the first Swarm which shall rise, either of your own, or of any Neighbours of yours within the compasse of a mile, it will knit in no place, but within that Hive, and such a stock will be worth five others, because they find half their work finisht at their first entrance into the Hive, and this hath been many times approved by those of the most approved experience. And thus much touching the Bee and his Nature.

A Plat form for Ponds, which the Printer hath added to this ensuing discourse, for the better satisfaction and delight of such as having a convenient plat of ground for the same purpose, shall be desirous to make any Ponds for the increase and store of Fish.

G. The Gate.

D. The Ditch and Quickset Hedge.

W. The Walls.

B. The Bridge.

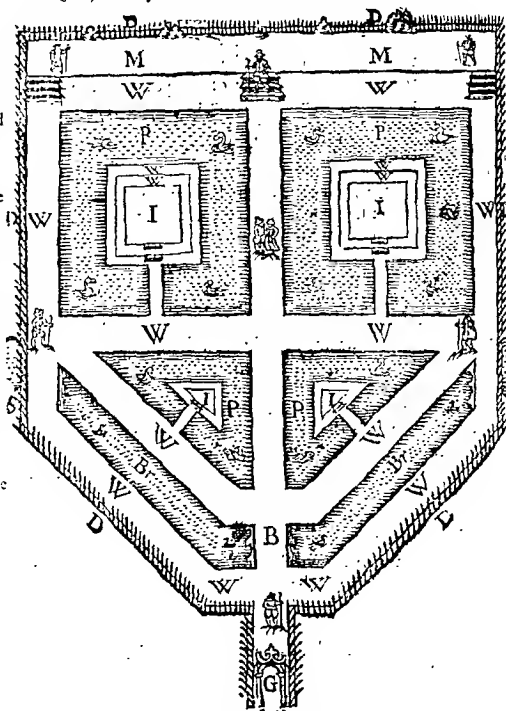
Br The Brook.

P. The Ponds.

I. The Peniles.

M. The Mount.

S. The Spring.



The Walks about the Ponds may be planted with Fruit trees, or Willows.



Of Fishing.

CHAP. I.

Of Fishing in general; and first of the making of the Fish-Pond.

AS much as great Rivers doe generally belong either to the King, or the particular Lords of severall Mannors, and that it is onely the Fish-pond which belongeth to private persons, I will as a thing most belonging to the generall profit, here treat of Fish-ponds. And first touching the making of them, you shall understand that the grounds most fit to be cast into Fish-ponds, are those which are either marshy, boggy, or full of Springs, and indeed most unfit either for grazing, or any other use of better profit. And of these grounds, that which is full of clear Springs will yield the best water; that which is marshy will feed Fish best; and that which is boggy, will defend the Fish from being stolne.

Having then such a peece of waste ground, and being determined to cast it into a Fish-pond; you shall first by small trenches, draw all the Springs or moist veins into one place, and so drain the rest of the ground, and then having marked out that part which you mean to make the head of your pond, which although it be the lowest part in the true levell of the ground, yet you shall make it the highest in the eye; you shall first cut the trench of your flood-gate, so as the water may have a swift fall, when you mean at any time to let it out; and then on each side of the trench drive in great stakes of six foot in length; and six inches square, of Oak, Ash, or Elm, but Elm is the best, and these you must drive in rowes within four foot one of another, at least four foot into the earth, as broad and as farre off each side the Flood-gate as you intend the head of your Pond shall go; then begin to dig your Pond of such compasse as your ground will conveniently give leave, and all the earth you digge out of the

Pond, you shall carry and throw among the stakes, and with strong rammers ramme the earth hard between them, till you have covered all the stakes; then drive in as many more new stakes besides the heads of the first, and then ramme more earth over and above them also; and thus do with stakes above stakes, till you have brought the head sides to such a convenient height as is fitting. And in all this worke have a special care, that you make the inside of your banks so smooch, even, and strong, that no current of the water may wear the earth from the stakes.

You shall digge your Fish pond not above eight foot deep, and so as it may carry not above six foot water.

You shall pave all the bottome and banks of the Pond with large sods of Flot-grasse, which naturally grows under water, for it is a great feeder of Fish: and you shall lay them very close together, and pinne them downe fast with small stakes and windings. You shall upon one side of the Pond, in the bottome, stake fast divers Bayens or Faggots of brush-wood, wherein your Fish shall cast their Spawn, for that will defend it from destruction; and at another place you shall lay sods upon sods, with the grasse sides together, in the bottom of the pond, for that will nourish and breed Eeles: and if you stick sharp stakes likewise by every side of the Pond, that will keep thieves from robbing them. When you have thus made your Ponds, and have let in the water, you shall then store them; Carp, Breám, and Tench by themselves; and Pike, Pearch, Eele, and Tench by themselves: for the Tench being the Fishes Physitian is seldome devoured: al so in all Ponds you shall put good store of Roch, Dace Loch, and Menew; for they are both food for the greater Fishes, and also not uncomely in any good man's dish.

You shall to every Melter put three Spawners; and some put five, and in three years the increase will be great, but in five hardly to bee destroyed. And thus much for Ponds and their storings.

CHAP. II.

Of the taking of all sorts of Fish, with Nets, or otherwise.

IF you will take Fish with little or no trouble, you shall take of *Salmon* ack aquarter of an ounce, of young *Chives*, and as much of a *Calves-Kell*, and beat them in a mortar untill it be all

one substance, and then make Pellets thereof, and cast them into any corner of the Pond, and it will draw thither all the Carp, Bream, Cheven, or Barbell, that are within the water; then cast your shove net beyond them, and you shall take choice at your pleasure. If you will take Roch, Dace, or any small kind of Fish, take Wine-leses, and mixe it with Oyle, and hang it in a Chimney corner till it be dry, or look black; and then putting it into the water, they will come so abundantly to it, that you may take them with your hand. If you will take Trout, or Grailing, take two pound of Wheat branne, half so much of white Pease, and mixing them with strong brine, beat it till it come to a perfect paste: then put Pellets thereof into any corner of the water, and they will resort thither, so as you may cast your Net about them at your pleasure. But if you will take either Pearch or Pike, you shall take some of a Beasts Liver, black Snails, yellow Butter-flies, Hogs blood, and Opoponax, beat them altogether, and having made a paste thereof, put it into the water, and be assured that as many as are within forty paces thereof, will presently come thither, and you may take them at your pleasure.

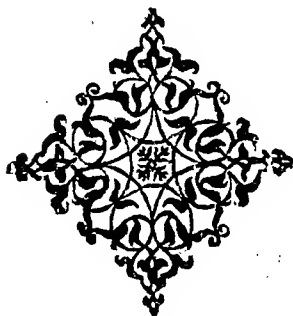
Lastly, If you take either two drams of Cock-stones, or twice so much of the Kernels of Pine apple tree burnt, and beat them well together, and make round balls thereof, and put it into the water, either fresh or salt, any Salmon or great Fish will presently resort thither; you may take them either with Net or otherwise.

Also it is a most approved experiment, that if you take bottles made of Hay, and green Oziers, or Willow mixt together, and sink them down in the midst of your Pond, or by the bank-sides, and so let them rest two or three dayes, having a cord so fastned unto them, that you may twich them up on Land at your pleasure: and believe it, all the good Eeles which are in the Pond will come unto those bottles: and you shall take them most abundantly: and if you please to bait those Bottles, by binding up Sheeps guts, or other garbage of beasts within them, the Eeles will come sooner, and you may draw them oftner, and with better assurance. There be other wayes besides these to take Eels, as with Weedes, with the Eele-spear, or with bobbing for them with great worms; but they are so generally known and practised

sed, and so much inferiour to this already shewed, that I hold it a needlesse and vaine labour to trouble your ears with the repetitions of the same; and the rather, sith in this work I have laboured onely to declare the secrets of every knowledge, and not to run into any large circumstance of those things which are most common and familiar to all men. And thus much of Fish and

Fish-ponds, and their general knowledge. Now as touching the Angle, and the secrets thereto belonging, you shall find it at large handled in the next Book called *Country Contentments*.

FINIS.



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4. Of *Goats*, their nature, shape, ordering and curing, from fol. 96. to 100.
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FINIS.

Country Contentments.
OR, THE
**HUSBANDMANS
RECREATIONS**

CONTAINING THE WHOLSOME
Experience, in which any ought to Recreate
himselfe, after the toyle of more serious
businesse.

As namely, Hunting, Hawking, Courfing with Gray-
Hounds, and the Laws of Lease, Shooting in
the Long-bow or Crofs-bow, Bouling, Tennis,
Baloon : The whole Art of Angling,
and the use of the fighting
Cock.

By G. M.

The Ninth Edition.

Newly Corrected, Enlarged, and adorned with many
Excellent Additions, as may appear by this Mark ¶



LONDON,
Printed by *William Wilson*, for *George Saw-*
bridge, at the Bible on Ludgate-hill,
neer Fleet-bridge. 1660.



To the thrice Noble and vertuous maintainer
and furtherer of all lawfull and worthy pleasures,
Sir THEODORE NEWTON,
Knight.

SI R, Howsoever banished by the necessity of mine affairs from your presence, (in which I once had the best and happiest estate of my Life, beginning to love it, because I found you did imploy it,) yet can I never be separated from your remembrance, because it is all the joy which is likely to live and dye with me; witnesse my soul, that shews me no worldly lesson so much, as the beneficial favours I have reapt from your vertue; which to acknowledge with a more earnest and serious fervency, I have sent this poor Book to kisse your hand, and speak to you in plain and short Rules those speeches which you have been willing to hear from my mouth; not doubting but they will give you satisfaction, and make me live both with you, and the inheritours of your vertues, to the last age. They are true and easie, drawn from these last times, not borrowed to bestow with a flattering insinuation, but faithfully drawn from Art, and from these experiments which I once thought should have slept in the grave with me: but having lived so long from your eyes (which I protest my soul truly loves) I studied to think what gratefull Embassadour I might send to speak I love you: I love you and finding none which I thought you would better hear than this, I furnishe him with the best instructions I could, and sent him only attired in his own vertue, to tell you, what I do, and what I will do, is ever to live and dye at your service

Cervase Markham.

To the best disposed Readers.



Any and sundry may be the constructions and censures of this Book (Courteous and well disposed Reader) because I have in former time written so largely of some part of the subject contained herein ; but I would have no man mistaken in his own prejudicate opinion, but truly understand, that this is neither Epitomy, relation extraction, nor repetition either of mine own, or any other Author whatsoever : but a plain form of doing things by a neerer and more easie and safer way then ever hath hitherto been discovered, drawn from the latest experiments in true art, and finding a neerer way to our ends by many degrees : for what before could not be done in divers years, here you shall see how to effect in few months ; and what we bestowed months upon to seek, now we may find in few weeks. The reasons which induc'd me to this labour were these, first to give satisfaction to the friends and favourers of my former works, that when they hear men discourse of these passages to our delights, they may yet know, that the first was neither ill nor vain, but what now is derived from it ; and that albeit we may be less curious, yet the curiosity is not altogether unprofitable, but both joyned together may make an absolute understanding. Then to give ease and a light burthen to the heavy and duller memory, whom the tediousnesse of a great work may discourage : and lastly, because my former labour is utterly out of Print, whereby the Kingdome is deprived of the benefit I intended, I thought good to have something living of lesse price, and as great (perhaps greater) profit, which should satisfie all vertuous minds in any thing required, within the compass of those former shewed Recreations : not doubting but howsoever men may first give a light survey to these papers, yet if they once take pains to read them, they will after affirm them worthy of choice bosomes. And with this settled resolution I leave them to thy view, and thee to thine own rest.

Ever one, Gervase Markham.

Country



COUNTRY
CONTENTMENTS:

O R,

The Husbandmans, Recreation containing the wholesome Exercises, in which any man ought to Recreate himself, after the toyle of more serious Businesse.

Hun

The first Book.

CHAP. I.

Of Hunting, and of all the particular Knowledges belonging therunto.



Having already in my former work of the *English Husbandman*, set forth in sufficient largeness, the toyl, and industrious labours of the careful *Husbandman*, and how both his mind and body ought in every season to be imploy'd for the effecting and bringing forth of those wholesome profits, which God hath appointed for the maintenance of him and his Family : And in the

the Book last going before called *Chapman's*, shew'd the cure and maintenance of his Cattle and creatures bred by him, & his labours, through Gods great Blessings; I think it not amiss here to speak of those lawfull and praise-worthy exercises or recreations, in which (with Gods fear, & care of not offending his neighbour) he may soberly spend those hours which he shall bestow in the cheerfull reviving and stirring up of his spirits, being formerly wearied or fore-done with the heavy toyl of more unpleasant (though more profitable) studies: both because it is intended that a man so good and vertuous as the true *Husbandman* is, should not be deprived of any comfort or felicity, which the earth, or the creatures of the earth can afford to him, being indited th: Right Lord and Master (next unto God) of them both; as also for the necessity thereof, being the strengthner and inabler of the mind, to undergo the weightiest affairs that can any way poise, or bear down imagination.

The necessity
and use of Re-
creation.

Hence it comes that the heathen Sages, or wise men of the first world, founded, with their Laws, their feasts; with their *Labours*, their *Olympicks*, with their warfare, their *Triumphs* nay at this day we see the severest pedants will give their Schollers their play day, and the most covetous masters will bind their hirelings but to certain hours; every toyl exacting (as out of duty) sometime for recreation: neither was there any *Stoick* found so cruel, either to himself or nature, but at sometime or other he would unbend his mind, and give it liberty to stray into some more pleasant walks, then the myrry wayes of his own wilfull resolutions. As I have observed in the course of many men of exceeding strict lives, to whom albeit severity of profession, infirmity of body, and age, or such like, have taken away all actual recreation, yet have their minds begot unto themselves some habits or customs of delight, which have in as large measure given them contentment, whether they were their own, or borrowed, as if they had been the sole Actors of the same.

But why wade I thus far in this untroubled stream? Let it suffice then that as Recreation is most necessary, so to none is it more due then to the *Husbandman*, and herein you may not expect, that I will go about to elect and prescribe what recreation he shall use, binding all men to one pleasure; God forbid: my

purpose

purpose is meerly contrary ; for I know in mens recreations, that nature taketh to her self an especial prerogative, and what to one is most pleasant, to another is most offensive ; Some seeking to satisfie the mind, some the body, and some both, in a joynt motion.

I will therefore, as far as my skill and knowledge will extend, figure forth to the life every severall recreation, leaving no limb or member imperfect, and then leave u to the choice of the *Husbandman*, that which shall best agree with his spirit : not doubting but as they are in themselves lawfull and modest ; so he will use them according to the worthinesse of his own, and their vertues. Now for as much as these sports are many and diverse, I think it not amiss to begin and give that recreation precedency of place, which in mine opinion (how ever it may be esteemed (partial) doth many degrees go before, and precede all other, as being most royal for the stateliness thereof, most artificial for the wisdom and cunning thereof, and most manly and Warlike for the use and indurance thereof. And this I hold to be the Hunting of wild Beasts in general : of which as Chafes are many, and so I will speak of them particularly in their proper places.

But before I proceed any further, I will tell you what *Hunting* is, and from the true definition thereof, make your way more easie and plain into the hidden Art of the same. Hunting is then a curious search or conquest of one Beast over another, pursued by a natural instinct of enmity, and accomplished by the diversities and distinction or smells onely, wherein *Nature* equally dividing her cunning, giveth both to the offender, and offended, strange knowledge both of offence and safety. In this recreation is to be seen the wonderfull power of God in his creatures, and how far rage and policy can prevail against innocency and wisdom : But, to proceed to my main purpose you shall understand that as the Chafes are many which we dayly hunt as that of the *Stagges* the *Buck* the *Roe*, the *Hare*, the *Fox*, the *Bulger*, the *Ox*, the *Boar*, the *Goat*, and such like ; so the pursuers or conquerors of these chafes (speaking of *Hunting* only) are but one kind of creatures ; namely, *Hounds*. Now of these hounds there are divers kinds, as the slow hound, which is a large

The praise of Hunting.

What Hunting is.

The diversity of Chafes.

The diversity of Hounds.

large great dog, tall, and heavy, and are bred for the most part in the West Countie of this Land, as also in *Cheshire* and *Lancashire* and most wood land and mountainous Countreys; then the middle siz'd dog, which is more fit for the Chase, being of a more nimble compofure, and are bred in *Worcestershire*, *Bedfordshire*, and many other well mixt soyls, where the Champain and covert are of equal largeness; then the light, nimble, swift, slender Dog, which is bred in the North parts of this Land, as *Yorkshire*, *Cumbreland*, *Northumberland*, and many other plain Champain Countreys: and lastly, the little *Beagle*, which may be carried in a mans glove, and are bred in many Countreys for delight onely, being of curious fens and passing cunning in their hunting; for the most part tyring, (but seldom killing) the prey, except at some strange advantage.

These hounds are of divers colours, and according to their colours, so weelest them for the chase: as thus for example. The white hound, or the white with black spots, or the white with some few liver spots, are the most principall, both to compose your Kennel of, and will indeed haunt any chase exceeding well, especially the Hare, Stag, Buck, Roe, or Otter; for they will well endure both woods, and waters: yet if you demand which is the best, and most beautifull of all colours, for the generall Kennel, then I answer the white with the black ears, and a black spot at the setting on of the tayl, and are ever found both of good sent, and good condition. The black hound, the black tann'd, or he that is all liver hew'd. or the milk white, which is the true Talbots, are best for the string, or line, for they do delight most in blood, and have a naturall inclination to hunt dry foot: and of these the largest is ever best, and most comely. The griffeld, which are ever most commonly shag-hair'd or any other colour, whether it be mixt, or unmixt, so it be shag-hair'd, are the best verminers, and therefore are chosen to hunt the Fox, Badger, or any other hot fents: they are exceeding good and cunning finders: and therefore have Huntsmen thought not amisse to have one, or a couple in every Kennel.

The shape and proportion of Hounds. For the shape of your Hound, it must be according to the climate where he is bred, and according to the natural composition

position of his body, as thus: If you would choose a large, heavy, slow, true, Talbot like hound, you must choose him which hath a round, big, thick head, with a short nose uprising, and large open nostrils, which shews that he is of a good and quick scent, his ears exceeding large, thin, and down hanging much lower than his chaps, and the flews of his upper lips almost two inches lower than his neither chaps, which shewes a merry deep mouth, and a loud ringer, his back strong and streight, yet rather rising, then inwardly yielding, which shewes much toughnesse and endurance; his fillets would be thick and great, which approves a quick gathering up of his legs without pain, his huckle bones round, and hidden, which shewes he will not tyre, his thighs round, and his hams streight, which shewes swiftnesse; his tail long, and rust grown, that is big at the setting on, and small downward, which shewes a perfect strong chine, and a good wind; the hair under his belly hard, and stiff, which shews willingnesse and ability to endure labour in all weathers, and in all places; his legs large, and lean, which shews nimblenesse in leaping or climbing, his foot round, high knuckled and well clawd, with a dry hard soal, which shewes he will never subaite; and the general compofure of his body so just, and even, that no level may distinguish whether his hinder or fore part be the higher; all which shew him of much ability, and that in his labour he will seldome find any annoyance. But if you will choose a swift light hound, then must his head be more slender, and his nose more long, his ears and flewes more shallow, his back broad, his belly gaunt, his tail small, his joints long, his foot round, and his generall compofure much more slender, and Grayhound-like: and thus in the generality for the most part, are all your *Yorkshire* hounds, whose vertues I can praise no further then for scent and swiftnesse: for to speak of their mouths they have only a little sharp sweetnesse like Gig, but no depth or ground like more solemn musick.

Now to speak of the composition of Kennels, though there is a most certain known better hood, yet it is to men like beauty each allowing best of that which agrees with his own affection, therefore when you intend to set up a Kennel of hounds, examine your fancy what be the best pleasures you take in

The middle-
siz'd dog for
running.

hounds, whether it be cunning in hunting, sweetnesse, loudnesse or deepnesse of cry; whether it be for the training of your horse or else but merely for the exercise of your own body, being otherwise subject to grossnesse and infirmity: If it be for cunning hunting, you shall breed your dogs from the slowest and laziest of the Northern hounds, and the swiftest and strongest of the West country hounds, being both male and female, approved to be staunch, fair, and even-running, or perfect fine scent, and not given to lye off, or looks for advantages. These hounds will neither be so exceeding slow, that you will waite many dayes without some fruit of your labour, or so unnimble, that you shall need men to help them over every hedge, as I have many times seen, to my much wonder; but having both strength and nimblenesse, will hold you in continual delight and exercise; for these middle siz'd dogs are neither so swift that they will far out-run the scent, and so fetch many tedious rings to recover it; nor so slow, that for want of speed they will lose the scent, and let it grow cold by their own lazinesse, but being ever and anon upon it, bring the Chase to such a narrow exigent, that the poor beast shall be fore'd to try all the skill, nature or strength hath lent it, to preserve life: and the hounds on the other side, all their pains, and the huntsmans cunning, to undoe intricate doubles, skips, squats, and windings with which they shall be perplexed; and in this mediocrity of hunting, shall your eye (if the covert be not too extream thick) take a perfect view of all the art and cunning in every passage, so that I conclude the middle sized hound, of good strength, sound mouth, and reasonable speed, which will make a horse gallop fast, and not run, is the best for the true Art and use of hunting.

For sweetnesse
of cry.

If you would have your Kennel for sweetnesse of cry, then you must compound it of some large dogs, that have deep solemn mouthes, and are swift in spending, which must as it were bear the base in the consort; then a double number of roaring, and loud ringing mouthes, which must bear the counter tenor; then some hollow plain sweet mouthes, which must bear the mean or middle part: and so with these three parts of musick you shall make your cry perfect: and herein you shall observe that these hounds thus mixt, doe run just and even together.

and

and not hang off loose from one another, which is the vilest sight that may be; and you shall understand, that this composition is best to be made of the swiftest and largest deep mouthed dog, the slowest middle siz'd dog, and the shortest legg'd slender dog, amongst these you may cast in a couple or two small single beagles, which as small trebles may warble amongst them: the cry will be a great deal the more sweet.

If you would have your Kennel for loudnesse of mouth, you shall not then choose the hollow deep mouth, but the loud clanging mouth, which spendeth freely, and sharply, and as it were redoubleth in the utterance: and if you mix with them the mouth that roareth, and the mouth that whineth, the cry will be both the louder and the smarter; and these hounds are for the most part of the middle size, neither extream tall, nor extream deep flow'd, such as for the most part your *Shropshire*, pure *Wiltshire* dogs are, and the more equally you compound these mouths, having as many Roarers as Spenders, and as many whins, as of either of the other, the louder and pleasanter your cry will be, especially if it be in sounding tall woods, or under the echo of Rocks.

For loudness
of cry.

If you would have your Kennel for depth of mouth, then you shall compound it of the largest dogs which have the greatest mouths, and deepest flows, such as your *West Country*, *Coechire*, and *Lincolnshire* dogs are, and to five or six base couple of mouths, shall not adde above two couple of Counter tenors, as many Means, and not above one couple of Roarers, which being heard but now and then, as at the opening or hitting of a fenc, will give much sweetnesse to the solemnnesse, and gravenesse of the cry, and the musick thereof will be much more delightfull to the ears of every beholder.

For deepness
of cry.

If you would have your Kennel for the training of your horse only, labouring thereby to bring him to the full perfection of speed, truth, and toughnesse, then you shall compound your Kennel of the lightest, nimblest, and swiftest dogs, such as for the most part all your Northern hounds are, which running swiftly away with the chase, will draw your horse up to that extraordinary speed, that he will forget all ease or loitering, and acquaint himselfe dayly with the violence of such exercise, being so

For training
of horses.

familiar therewith; that in the end it will be lesse troublesome to him then a slow gallop: and hence it was and is, that the North-parts are so famous for the truth and swiftnesse of their horses, above all other Countries in this Kingdome: for it is most certain that their horses are not better bred there, then in other places, but their exercise is much stronger, and violent through the naturall swiftnesse of their hounds, insonmuch, that unlesse a horse either out of nature, or education, be brought to a more then ordinary speed, it is impossible that his master should either see sport, or keep company with his companions.

A good caveat for Gentlemen.

Therefore I would have all young Gentlemen, which are addicted to the delight of hunting, or running horses, by all means to train them up after the swiftest hounds: for it is the greatest deceit and coufenage a man can bestow upon himselfe, to do the contrary, as I have seen many times in mine own experience, when a Gentleman who hath supposed his hounds to be swift, which indeed were but of a middle speed, and hath seen his Horse follow them all day lustily and strongly, in every Chase able to command the formost hound at his pleasure, he hath immediately in his own judgement concluded his horse swift and matchable with the best, and from that opinion ingaged him against a known swift horse, for great summes of money: then when the day of tryall, hath been come, the horse which had been trained after slow dogs, comming to follow those that were indeed swift, hath been drawn so far beyond the usual manner of former exercise, that he hath given over the Chase before the day hath been half spent.

This caveat I give for all mens instructions, because I have seen the losse which hath grown thereby. And now to return to my purpose; your Kennel thus composed of the swiftest hounds, you shal as nigh as you can, sort their mouths into three equal parts of musick, that is to say, Base, Counter-tenor, and Mean; the Base are those mouths which are most deep and solemn, and are spent out plain and freely, without redoubling: the Counter-tenor are those which are most loud and ringing, whose sharp sounds passe so swift, that they seem to doole and make division; and the Mean are those which are soft sweet meutthes, that though plain, and a little hollow, yet are spent smooth

smooth and freely; yet so distinctly, that a man may count the notes as they open. Of these three sorts of mouths if your Kennel be (as near as you can) equally compounded, you shall find it most perfect & delectable: for though they have not the thunder and loudness of the great dogs, which may be compared to the high wind-instruments, yet they will have the tunable sweetness of the best compounded consorts; and sure a man may find as much Art and delight in a Lute, as in an Organ. But here me thinks, a too tender lover of a horse stands at my elbow, and pulls me by the ear with this Objection, that to train horses after dogs of this exceeding swiftnesse, will be a labour of hat violence, which a young horse will hardly endure: For first it will draw him so suddenly from his wind, that it will breed stopping in his body, and choaking up the passage of his breath, hazard the breaking of his Lungs, or the rime of his belly, as hath been many times seen in horses of great metal: Next, the horse being young and unacquainted with exercise, it will breed in him a weariness and loathing of his labour, and nothing is well done that it is not done with delighe: Lastly, the horse being foul of body, and unpurged, it may melt his grease too soon, strain his sinews and tender gristles too much, and breed many diseases, foul, and incurable, of which only too violent Labour is the ground-work.

Objections
against swift
hounds.

To this objection I thus answer, that a'beit the labour be for the time most violent, yet it is not of so long continuance as that which is more slow; and to run twelve score swiftly, is not so painful, as to walk twentymiles. for you must understand that these swift hounds out of their metal and swiftnesse do soon overshoot and runne beyond the scent, and then retiring back up-on it again, give the horse time to ease himselfe, and catch new breath; whereas the slower dogs carrying the scent ever before them, keep your horse to a continual labour, which is more painful, and makes him a tough enduring Hackey, but not a most swift running Gentleman: besides, the many faules and castings about of the swift dogs, add such a comfort unto the horse, who perceiveth the strength of his labour to have no ease till he come up to those Faules, that he will out of the willingness of his own nature, double his courage to pursue the most

The answer.

swift, seeing his ease is ever the greater, by how much he keepeth ever nearer to the hounds. For the danger of busting, melting his grease, and other infirmities, the discretion of the Rider, and skill of the Keeper, must prevent, of whose Officer I have written largely in former Chapters in the Book called *Cheap and Good*: for be assured, those dangers may happen as well after the slowest dogs, as the swiftest.

Correction of
swift hounds
haste.

But to my purpose, since hounds are the subject of my discourse: You shall understand that these swift hounds are, as before said, out of their haste, nimbleness, and mettal, more subject to make default: then other hounds; yet full as curious and good of scent as any other, as you shall perceive by the quick knowledge and apprehension of their own errors, casting about of themselves, and recovering the scent, and so going away with the same, before any huntsman can come in to help them: yet I would wish every Gentleman-like husband man, in the composition of this Kennel, to have some staunch old dogs amongst them, which running more soberly, yet close with them, may lie upon the scent, when they overshoot it, and so call them back, and give them their losse without more trouble. Also I would have both in this Kennel, and every other, a couple at least of good finders, being dogs stanch of mouth, and not able to open their mouth, they lie upon a certain trayle; for these will be great furtherers of your sport, and make your younger dogs a great deal more mute and painful.

Of the High-
way hounds.

You shall also in this, and all other Kennels, have at least a couple of good high way dogs, that is to say, hounds of such cunning and perfect scent, that they will hunt as well upon a dry, hard, high-way (where you cannot pick forth the passage of your Chase) as upon the freshest mould, or will hunt as truly through flocks of sheep, or herds of beasts, as upon the grounds where few or no beasts come, these are called hounds for the high way, or guides of the Kennel, and are exceeding necessary, and fit for all mens pleasure: for they take from the huntsman, both sense of pain, and anger.

The kennel
for exercise of
body.

Lastly, if you would compose a Kennel only for the exercise of your own body, or maintenance of health, you shall first draw into consideration your own ability, as whether you

you will make your exercise on foot, or horse back. If your delight and ability draw you to hunt on foot, then I would wish you to compose your Kennel of the biggest and slowest dogs you can get, respecting only cunning hunting, and depth of mouth; and this Kennel you make so staunch and obedient to your command, that when they are upon the hottest scent, or in the earnestness of the chase, to stop before them, and cast your hunting pole but before their eyes, they shall suddenly stop, and hunt after you in full cry; with no more speed than it shall please you to lead them; and then when you please, to let them go before you again, to passe away with the scent roundly, and without stay.

This manner of hunting will carry with it a twofold delight, the one of enjoying the music of their voices, the other the moving of their nose: each striving to go before, yet none presuming without leave to go before: by this rule you shall bring the hottest scent, and the coldest scent to one manner of swiftness, and so neither offend your body with too much nor too little exercise. But if you will take your exercise on horse-back, because infirmity will not let you run afoot, then you shall compose your Kennel of the slowest, or middle sized hounds, who shall have both good mouths, and load, and noses of most ready scent, and perfect hunting: and if you bring these hounds also to the former obedience of stopping and hunting after you, it will be exceeding good and delightful, both to your eyes, and ears, and so bring your hounds to temperance and coolness in hunting, that taking the frenzied and greediness of haste from their mind, they will make your sport much longer, and less weary, than else it would be.

But some will answer me, that albeit they have infirmities, which detain them from running afoot, or labouring like belies or drudges, yet they can endure ordinary and orderly walking, such as shall be fit for any moderate exercise: and therefore could hunt on foot: yet the great hound they like not for two causes: first his chargeable and troublesome keeping, and next his noisomness and pestering company in a house that is but slight, and of no more then of necessary use. To these I answer, that it is good for them to keep the little small Mitten-Beagle, which

which may be companion for a Ladies Kirtle, and in the field will hunt as cunningly as any hound whatsoever only their mufick is very finall, like reeds and their pace like their body; only for exercise, and not for slaughter.

Of the
hounds Kennel.

Having thus composed your Kennel of hounds according to the humour of your own fancy and delight, it shall be meet then that you frame a Kennel or house to keep them in, wherein they may lie dry, and have their food and other necessaries about them, without troubling your dwelling house, or giving offence by their greediness and ravening.

The situation
of the Kennel.

This Kennel for hounds, would be placed a pretty distance from your dwelling house, near some river, pond, spring, or other fresh water: it would also stand against the side of some bank or hill, which looking directly against the East, the morning Sun might rise upon the same, and not lose the sight of it till at least two or three hours after noon, which will be a great refreshing and comfort unto the hounds, which love naturally to stretch them, and pick themselves in the Sun: against the side of this hill, would be cut or digged, divers large and broad seats one above another, containing at least five foot in breadth, and two foot and a halfe in height, which seats would be either boarded, or wated with stakes and small wands on the sides, to hold up the earth from falling, and also close boarded aloft; whereon you shall lay fresh and sweet straw for your dogs to lye upon: the number of these seats would be according to the number of your hounds, and the quality of the earth in largeness: over these seats would be made a close and well tiled shed, open no way but upon the East, and in such manner that it may defend either all or most part of the seats from rain, wind or any tempest: from the lowest part of these seats forward, you shall make a large green court, being either walled, paled, or otherwise very strongly fenced about, in which your hounds may play, sport, scummer, and do other offices of nature fit for their health: also in this court, in the most convenient corner of the same, you shall build a little house or lodge, with a spacious and large chimney in the same, wherein in the winter time you shall allow fire, before which your dogs returned (from hunting) may stretch, pick, dry and trim themselves, which is an exceeding

ing comfort unto them. and wil make them more strong and able to endure their Labour, and also keep them wonderfully well both from the many and other filthy diseases which proceed from colds taken after violent heating. In this Chimny your Huntsman shal have a large Cauldron, and other necessities, as Ladles, Skummers, and such like; for preparing and making ready of all such warm meat as you shall allow to them, which if it be sweet is call'd Mange; if otherwise, Carrion. or Garbage: above this lower Room shall be your Huntsmans Lodging, wherein he shall also keep his couples, Liams, Cellars, Trashes, Boxes and pots with salves and oynments, for the cure of such infirmities as shall happen amongst them, and all other necessities any way belonging to his office. In an other part of the court, and neereft unto the house, you shall place troughs and tubs, some for their meate, and some for sweet Water: all which must be kept very neat and clean; and Water must by no means at any time be wanting, yet oft renewed, and the vessels scowred for sweetnesse sake for the Huntsman ought to hold it for a Rule, that nothing bringeth more health than cleannesse. Into this kennel you shall by no meanes bring at any time Carrion, because it wil make the place unsavory, and unfit for any man of worth to look into, and sure it ought to be a place fit for every worthy Eye.

Now your Kennel being thus orderly, and wel prepared, it *Of Hounds;* is meet that I shew what meat is meetest for hounds; how it shall be prepared, and how they shall be fed. First then, intending that I only speak of hunting hounds, that is to say, hounds which are in continual use & action, you shal understand that in their dayes of rest, the strongest and lustiest meat you can give them both for raising them up when they are low hunted, or for keeping them in strength when they have lust within them, is either horse flesh newly slain and warm at the feeding. the intrals and garbage of Beasts (Lungs only excepted) or the heads, plucks, and bowels of sheep, or generally any Carrion which is not old, nor cold after the death. To feed them for perfectnesse of hunting, and to keep their senses fixe, pure and clean, or to purge the stench of the carrion out of their noses, that thereby they may undergoe the work with more cunning, the best food is to give them

Mange, made either of ground Oats, Barley Meale, Branne, or Mill-dust, well scalded and boyled together, or any of these two mixt together and scalded with beef breath, or any other breath in which flesh hath been sodden, so as it be not too extream salt.

Now for the use and manner of feeding with these meats (as I said before) horse-flesh, gaibage, and other carrion is only to breed strength, and lust in a hound, and is to be given only when a hound resteth; because the strength and smel of the same will so cloy and stop the hounds nostrils, that he can hardly distinguish or undertake any finer sent, and so breed much hindrance to his hunting: Therefore you ought ever to feed your hounds at least the day before you hunt, if not more, with sweet meat.

Now for the manner of feeding with horse flesh, or any other carrion, you shall be sure to have it a good distance from your Kennel, and so as it may be no annoyance either to your own neighbours, or travellers in the high Way; then first before your Hounds touch it, with your Knife take off the skin, then open the body, take out the bowels and rip them; then, if the body be more then either your hounds can, or must eat, take off a leg, or a shoulder; or such part as you think fittest to preserve, and lay it by; then let your hounds feed on the rest, till their bodies be well filled: which done, draw your hounds home and upon some stange for the purpose, carry with you that which you saved; which as soon as you have shut up your hounds, you shall bear to the River, or fresh Water, and lay it in the same until you have occasion to use it; for it will keep it sweet a week or more at least, if need require.

Now for feeding with Mange, or sweet meat, it would ever be done the day before you hunt, and as it is to be prepared in the Kennel, so you shall let them eat it in troughs, within the Kennel, for that will make them take delight in the place; and this Mange must ever be given warm, and made somewhat thick, and if you white it over with milke, or butter milke, and if you cast into it chippings, crust of bread, bones, broken meat, or scraping of trenchers, it will be better, and they will eat it with more greediness.

If you have hounds that are poor, weak, or sickly, which you would suddenly recover and bring unto hunting : Then if you take sheeps heads, wool and all, and hack, hew, and bruise them in many pieces ; then boyl them with Oatmeal, and Penny-royal and make strong pottage of the same, and give all together warm to your sick hounds, and it will suddenly recover them ; if once in a week also you give them a full meal of warm horse flesh, it is very soveraign. Meat for sick and weak hounds.

Now for the best times of feeding, it is held amongst all our best experienc't Huntsmen, to be in the dayes of rest, early in the morning before Sun rise, and in the Evening at Sunne set : But in the dayes of hunting, you shall let them go fasting out of the Kennel & feed them as soon as you come home to the Kennel or before in your way homeward, if you have any horse flesh, or other Carrion readily provided : otherwise with such meat as you have, so it will fill their bellies ; for a hound by no means would be pinched of his belly after his labour, and therefore be sure if your meat be coorse to fill his guts well ; if it be sweet, strong and comfortable, then lesse will serve him. Best hours of feeding.

And here I think it meet to speak of a convenient proportion of food, for the maintenance of a Kennel of good hounds : Where in you shall understand that three bushels of Oats, or Barley-meal, with half so much Branne or Mil dust, is a fit weekly proportion to keep nine or ten couple of hounds ; with a little help of horse flesh, if the huntsman be any good husband, and painful as he ought to be in finding out horses, scraps, crusts and bones, which almost abound in every mans house of any worth or reckoning & by imploying that which is saved in the daies of labour to increase the proportion when need shall require : Many much larger quantities I have known, and do know allowed this day in divers places ; but I have held it an abuse to the Master, & either a coverousness or negligence in the huntsman, by whose unskilful greediness, I have seen many tyred out of their pleasures. Therefore be assured this quantity already named, will fully suffice, nay, even to please a most wonton curiosity ; and surely much les, if a painfull Huntsman have the government : for I shall never see fairer or better kept hounds, then I have seen mainted with half this proportion ; but as I would not be too.

lavish in my directions, so I would much less be too strait handled, hoping that every man of honesty and trust will order his affair with discretion.

Ordering of
Hounds after
hunting.

Now for the ordering of your hounds after they have done hunting, you shall, if you feed them abroad or otherwise, as soon as you bring them into the Kennel, wash all their feet either with a little warm butter and bees, beefbroth, or water, wherein Mal-lows and Nettles have been boyled soft and tender, you shall pick every cley, and search the foot for thorns, stubs, or any other pricklings; you shall look that the straw whereon they lye, be sweet and frish; and if it be in the strength of Winter after they are fed, you shall suffer them for an hour or two to break and stretch themselves before the fire, ere they go to lye down for all night, and by no means trouble them as long as they licke, pick, or trim themselves; but that once finished, you shall force them from the fire, and make them find out their Lodgings.

CHAP. II.

The curing of all manner of infirmities in Hounds.

Of killing
fleas and lice.

NEXT unto these precepts, it is meet you be skilfull in curing of all the diseases in hounds, of which as there be many so here you shall partake many rules for the same, both perfect, and excellently approved by late experience. And first of all, in as much as it is an infirmity of all other most general, natural, and as it were not to be divided from Dogs I will begin with the killing of fleas and lice, and such like vermine in hounds which proceeds from filthy keeping, rotten and moist lodging, and want of shifting of straw when it growes short by much lying on it; then your hound be troubled with fleas or lice, you shall take Rue or hearb of Grace four or five handfuls, and boyl it in a gallon of running water till a pottle be full consumed, then strain it through a coorse cloath, and put to it two ounces of strong *Stavesaker* beaten to powder, and being warm, bath your hound therewith and it will destroy them.

To kill worms

If your hound be troubled with worms, which is very general amongst them, especially the young hounds, then you shall take a pint of new milk and mixe it with a good quantity

ting of Brim stone, and so give it luke-warm unto the hound, and it will not only scower away all manner of wormes, but all other filthines bred in the body of a hound, either by labour or surfit.

If your Dogge have been bitten by either Snake, Adder, or any other venenous thing, take the herb Calamint. and beat it in a mortar, with Turpentine and yellow waxe, till it come to a salve, and then apply it to the sore and it will heal it : Also if you boyl the herb in milk, and give the dog it to drink, it will expel all inward poyson.

If your hound have been bitten with another mad Dogge, which is a disease exceeding dangerous and mortall, you shall presently wash the place so bitten with Sea water or a very strong brine, and it will save and cure him : or else take the herb called Yarrow, and beat a handfull thereof in a mortar, with a handfull of wheat till it come to a salve, and then lay it to the sore, and it will heal it : and if you pour into his stomack as much Mithridate as a hazel nut, dissolved in sweet wine, it will wonderfully scoure and preserve him from the infection of the inward poyson.

The infirmity of madness it self in Dogges, is common and oft to be seen, and though it be altogether incurable, yet if a man be experienced in the first signs or characters of madness, he may prevent divers mischiefs, and most mortal evils, which ensue for want of such knowledge, and albeit he lose one Dogge, yet he may save all the rest : the first sign therefore to know when a Dogge is entring into this disease, is a melancholy separating himself from other Dogges, and walking up and down alone, oft casting up his head into the wind, and looking upward, his rayle at the setting on, rising upward, and the tail hanging down, his mouth will foam and be full of slaver or white froth, as he runneth up and down he will hastily snatch at every thing that he meeteth with, yet but only give one snatch and away, his eyes will be red and more fiery then other Dogges, and his breath will be strong and of a filthy savour : any of these signs when you shall perceive you shall presently separate him from other Dogges and kill him, for unto the disease is no cure.

If your hound be gau'd, or his skinne torn in any part, you shall

shall only take *Maz* butter, yellow Wax, and a little unslackt Lime beaten together like a salve, and therewith anoint the sore place, and it is a present cure.

Of a Tetter.

If your hound (as they are much incident thereunto) have any tetter or dry scab, you shall take of black ink, the juce of mints and vinegar of each alike quantity, and mix them together with the powder of Brimstone till it be thick like a salve, and then annoint the tetter therewith till it bleed, and it will soon kill and cure it.

For the Itch.

If your hound be troubled with the itch, you shall take Nerve-oyle, and beat it with quick-silver till the quicksilver be kil'd, and the oyle turned to a pale yellow colour, then with the same annoint the Dog before a good fire, and chase it well against the hair and it will cure him.

Of the mangy or scab.

But, if your hound be troubled with the scab or mangy, then you shall take a penny-worth or two of the best gun-powder you can buy, and mixing it with very strong wine vinegar, make it thick like puddle, then with the same annoint all the places where he scratcheth till they bleed, and it will kill the mangy; there be others which do use to cast their Doggs into the Lime-pits of Tanners, or Glovers, and force them to swim up and down the same, and it will kill the mangy; yet there must be a great care taken in putting the Dogs in lest doing it rashly, the Lime water get into their eyes, which is very dangerous, and will hazzard their burning out.

Of Wounds.

If your hound shall receive any wound, whether it be with sharp or blunt weapon, or any accident whatsoever, although his own tongue be a soveraign salve, yet if it be in any part, where either he can or will not lick it, the best cure is to wash it with warm butter and vinegar mixt together, and then annoint it with a little Venice Turpentine; but if it be a hollow wound, and must of force be tented, then you shall either tent it with sweet butter and oatmeale, wrought together to a salve, or with yellow Wax and Deer-suet; there be some that will use for a tent a small candles end, & it is very good if the tallow be sweet, but if it be putrified then it will poyson and corrupt the wound.

Of a Canker in the Ear.

If your hound be troubled with a canker in his ears, which is a grief much incident unto them; you shall first tent the hole

if you find any, with dry cork, and after wash the sore with vinegar and allome, mixt together, till the flesh look raw, and after dry it with burnt Allom only.

If your hound be subaited, you shall wash his feet with butter and beer boyled together, and then bind to the soles of his feet young red nettles, chopt very small, or beaten in a mortar till they come to a salve. Of subaiting.

For any manner of bruise which shall happen to your hound, either by rush, spurn, stroke or otherwise, if it appear and swell outwardly, you shall bath the place, with chick-weed, and groundsal, boiled in strong Ale dregs till they be soft, and it will allay the swelling : but if the bruise be inward, then you shall with a horn give the Dog a pint of new milk, and a quarter of an ounce of *Sperma cati* well mixt together, or for want of *Sperma cati*, double so much *Stone-pitch* beaten to fine powder. Of Bruise.

If your hound be troubled with the stone, or other filthy matter, which maketh him that he cannot piss, you shall take the seeds of the herb *Gravum folie*, or *Cornel*, and bruising them give them to the hound in half a pint of white wine. For the stone.

If your hound (as it is natural to Dogges) be so coltive that he can by no means skummer, you shall first take a piece of a tallow candle, about three fingers in length, and thrust it a good way into the tuel of the hound, and then hold down his tayle hard a quarter of an hour or more, and then give it liberty, and when he hath emptied his belly, you shall give him to drink five or sixe spoonfulls of Sallet oyle, and it will cleanse him sufficiently. For coltiveness.

If your hound be troubled with any disease in his ears, whether it be a continual running, or any other impostation, you shall take verj yce and chervile water, and mixe them together, and each morning and evening drop a spoonfull or two thereof into the Dogges ears, and you shall find it a present Remedy. For any disease in the Ear.

If your Dog at any time be troubled with sore eyes, of what Nature or Quality soever the grief be : you shall take a leafe or two of ground Ivy, and chewing it well in your mouth, and sucking out the juyce, spit the same into the Dogges eyes morning and evening, and it will cure them. This ground Ivy is a little round rough jaggy leaf, and grows in the bottome of hedges. For sore Eyes.

If your hound shall happen to break a legge or any other bone, you shall first with your hand place it in his true place, and see that it stand straight and even, then bath it in the warm oyl of swallows, or the oyl of *Mandrage* apples, and wrapp it about two or three times, in a sear-cloth made of yellow waxe and Deers suet; which done, splent it with flat splents of wood, and so role it with a strong roler, and let it so rest nine dayes at least before you unsplent it, but remove not the seare-cloth for fifteen dayes, and you shall see the bone will knit strongly and firmly.

CHAP. III.

Of the breeding of all manner of hounds.

HAVING thus passed over the election of hounds, composition of Kennels, dieting, and curing of all sorts of diseases; I hold it meetest now to follow with some short precepts the breeding of Hounds, because it is exceeding hard, for any man to have a Kennel of hounds from gift or purchase without much imperfection: for though one friend give you a good hound, another sells you a good hound, yet how their goodnesse wil agree when they run together, is very disputable: and truly unless your hounds have one speed, one tuneableness of voyce, and one manner of hunting, your pastime will be much disorderly; which there is no way to get so easily and truly, as by the breeding of your hounds for one and the same birth produceth one and the same qualities: therefore having a hound and a bratch of that size, voyce, speed, sent, proportion and general goodnesse which agreeth best with your own nature and condition, you shall put them together to ingender and breed, either in *January*, *February*, or *March*, according as they shall grow proud, for those are the three most principal months in the year, for hounds, bitches or bratches, to be limed in: not but that they may conceive and bring forth as good Whelps in other months; but because there will be much losse of time in the entering of them: for if a bratch be limed in *January*, she will whelp her Litter in *March*, and so they will be ready to enter in the first beginning of hunting-time: if she be Limed in *February*, she will whelp in *April*, and if she be Limed in

Hounds must
use one ano-
ther.

The months
to breed in.

March

March, she will whelp in *May* following : and in all these three Months there is not a dayes losse, for the entring of the whelps; which is an especial care to be observed of Huntsmen.

Also if you shall let your hounds ingender in the three monerhs
aforeſaid, you ſhall not forget to obſerve as near as you can,
that when you put the Dog and Bitch firſt together, the Moon
be either in the ſigne *Aquarius* or *Gemini*; for it is held amongſt
the beſt Huntſ-men of this Land, that the whelps which are
ingendred under thoſe two ſigns, will never run mad; and for
the moſt part, the Litter will have at leaſt double ſo many Dog-
whelps, as Bitch Whelps. When your Bitch is near whelping,
or hath whelped, you ſhall ſeparate her from other hounds, and
have a private kennel for her, where ſhe may be alone without
company of other hounds; and you ſhall duely every night ſee her
kennell'd in the ſame, that ſhe may take acquaintance and delight
therein; and when you feed her particularly, you ſhall feed her
in that kennel, that taking a love thereto ſhe may not ſeek out
other unfit and unwholeſome places to whelp in: for where a
bitch firſt whelpeth her Litter, if they be removed, ſhe will not
leave carrying her Whelps up and down, till ſhe have found the
ſame place again, or ſome other perhaps more unfit then the for-
mer, and ſuch carriage of Whelps by the Dam is very ill and dan-
gerous: this kennel where your Whelps ſhall remain, ſhall not
be kept cloſe, but open, that the bitch may have liberty to go up
and down after twenty four hours ſpace, which time ſhe ſhall be
kept very well, cloſe and warm, that ſhe may perform the natu-
ral office of a Dam to her whelps.

You shall not suffer your Whelps to suck above two moneths when to
at the most, but then you shall Wean them, and if the House you wean
keep be of great receipt and many servants, you shall let your whelps.
Cook bring up your best Whelps, and your Dairy-maid, your se-
cond best, and the rest you shall put forth amongst your friends,
or Tenants, according unto the love you possesse in the Coun-
trei.

Now when your Whelps are brought up, you shall not enter ^{when to} them into hunting before they be at least a year and half old, ^{as enter} thus, whelps.

D

thus, whelps.

thus, if your Whelps were whelped in *March*, then you shall not enter them untill *September* come twelve moneths after: and if they were whelped in *April*, then you shall enter them in *October* come twelve moneths after. And so forth, for the rest of the moneths.

How to
enter
Whelps.

Now for the manner of your entring of Whelps, you shall draw them abroad in the pleasantest of the day, with the most staunch and best hunting hounds you have, leaving at home all babling and flying Curs; and if you can, you shall have your Hare ready set before you come, (for the Hare is the principal chase you can enter Whelps upon) and then putting her from her form, and viewing perfectly which way she taketh, after the sent is a little cooled, lay on your hounds, and give them all the advantages you can for the hunting of her, as by wind, view, hollow, or pricking her passage: and if they shall chance to kill her; you shall immediately take her from the hounds, and not suffer them to break her, for it is an evil custome, but your self stripping away the skin, shall cut her all to pieces, and give every part of her to your young Whelps, which will breed in them great courage and delight in hunting.

Observa-
tions in
the en-
tring of
Whelps.

You shall observe in the entring of your young whelps, that they hunt fair and even, without advantage, or seeking any way to gain ease, as by lying off from the sent, thwarring or crossing when they are behind to get even with the formost hounds: any of which when you shall perceive, you shall immediately beat them in with your hunting pole, and compell them to take the sent before them: also if any of them be giddy headed, and out of mettle will run before the other hounds cleane from the sent, in this case also you shall beat them soundly back, and bring them back to the sent, and force them to take it with the rest of the Kennel. Also if any young hound will not strike upon a default, but run babling away without the sent, drawing away the rest of the Kennel to follow him; in this case also you shall scourge him back, and compell him to stand and labour upon the default, till some of the elder hounds undertake it, then you shall cherish all both with horn and voyce into the Chase.

Lastly, if you find that any of your young Whelps trust more

to his own lent than to the rest of his fellows, and so by that meanes hunteth at least twenty foot sometimes behind the rest, making his defaults by his own nose, and not their own leading, yet hunteth very iust and true : In this case you shall by no means over-goe, or over-ride the Whelp, but give him all comfort and encouragement you can, and let him take his own time and leisure, for use and experience will quickly make him skilful, and the skill will soon carry him up, among his fellows where hee will soon become a principall Leader : and thus much for Hounds, and the composition of kennels.

CHAP. 4.

Of all the severall Chases which Hound are to hunt.

There hath already (by many well experienced men) been so much written of this Subject, that I know not well what to write, except I should in some sort repeat another mans tale : from which I am so far different (having vowed to my self, by no means to meddle with any thing formerly written) that the strictest examiner whosoever, shall not find me guilty of the least blemish therein : yet since I must necessarily in this case write something, I will as briefly as I can set downe some materiall and speciall notes, and for the main substance if they desire a long continued circumstance (though this is sufficient for any understanding wit) referre them unto old *Frisstram's* book, translated by Mr. *Inrbervile*, and such other Books, where they may find compleat satisfaction.

To speak then first of the Stagge, which is the most Princely and royall Chase of all Chases, and for whom indeed this Art of Hunting was first found out, and invented : he is of all Beasts the goodliest, hardest, and most man'y, and for the use of Man, the fullest both of outward and inward profit, as in his flesh for the nourishment of Mans body, and in his other members for helps in Physick : as the bone in his heart, which is Sovereaign for all inward faint sicknesses, for Poyson, the Plague, and hard Travail in women, his blood excellent for all kind of Fluxes,

The hunting of the Stag.

and to make the skinn white and smooth ; his pizle good for the Colick and bloody-flux ; His Horne a most soveraigne Cordial against venome : his suet good for swellings, Gouts, and Humors, and his skinne, which is ever a during and Gentlemanly cloathing : and of Stagges, the olded and greatt is the best.

How to know an old Stag. The perfect signs to know an old Stagge by, are these ; if when you take his view upon the ground, you see he hath a large foot, a thicke heele, and a deep printing, and open clef; and a long space ; then be assured he is old : also if his legge be long, and his bone thicke, it shewes age, besides your old Sage doth not over-reach, when your younger Deer doth : also you shall know his age by his ordure, as thus if it be printed (as it will be from *July* to *August*) or writhen round, or flat, or broad, as it will be in *June*, and therewithall be grosse and fatty, then he is an old Stagge ; but if contrarily small and dry, then he is but a young Deer : you shall know his age by the tines of the hornes, for if he have ten, twelve, or fourteen tines, he is a Deer of reasonable age, but if the beame bee thicke and great, then hee is an old Deer ; so if hee carry but some six or eight tines, and a small beame, then hee is a young Deer, and not above three or four years old, for the Red Deer is said the first year to have no head, the second but onely daggers, and the third tines.

The cast of Heads. Stags yeerly cast their heads in *March*, *April*, *May*, or *June*, and in no other months, according to the goodnesse of the Soil wherein they feed, for the richest ground beareth ever the earliest Deer, and a Deer is never said to be in season, nor may hee by good rule be hunted till he have cast his head.

How to find a Deer. The principall quality in a Husbandman, is, to know how and where to find a Deer ; for if hee be ignorant in their haunts, hee may wander long, and lose much labour. Therefore hee shall know, that a Red Deer naturally haunterh in *November* amongst Furs, Whins, or thicke Shrubs ; In *December* amongst thicke and strong woods. In *January* in Corn-fields of Wheat and Rye. In *February* and *March* amongst young and thicke bushes : In *April* and *May* in Coppices and Spring ; In *June* and *July* in outwoods, and purlews which are nearest unto green. Corn, and

and in September and October, after the first showers of rain they go to Rut.

Now when the Huntsman will at any time search any of these places to find his game, hee must bee carefull by no means to go downe, but up the wind; for a Deer is of most dainty sent, and upon the least fault will fly and leave his feed: therefore hee must come carily and closely, with a quicke ear, and a ready eye.

Now the best time to find out your Game, is early before ^{The hunting of} Sunne rise, at which time the Deer goeth to his food: from ^{the Stag.} whence you shall watch unto his Leir, and having lodged him, you may retorne home and prepare all thing for the dayes hunting: for be assured, except violently compeld, he will not stir untill Evening.

Now for the manner of his hunting: you shall first cast off your finders, neer his place of lodging, and after they have hunted him about a ring or two, you shall cast in the rest of your hounds, and beeing in full cry and main chase, you shall give them comfort both with horne and sight of the Deer, and take what especial notes or marks you can from him, so that as much as is possible you may know him from any other Deer; then at every default, as soon as the hounds are in cry again, you shall make in to the hunted Deer, and view him, and if you find it to bee a fresh Deer, you shall rare the Dogs, and bring them bak to the default, and there make them cast about again, untill they have undertaken the first hunted Deer, then give them comfort by hollowing and Gibbers, and so continue the chase till you have either set up the Deer or slain him, ever and anon having a watchfull eye unto change: for it is the nature of a Deer, when he is once imboist, or weary, to seek where hee may find another Deer, and to bear him up and lay himselfe downe in his place.

To know when a Stagge is weary, you shall see him imboist, ^{To know when a Stag is weary.} that is, foaming and flustering about the mouth with a thick white froath, his hair will look black, shining and foul with sweat, and hee will rappish oft, that is, he will ever and anon be lying down and lurking in dark holes and corners, and for his last

Refuge hee will betake himselfe to the soyl, which is, hee will leape (if he can) into rivers, ponds, or other water, out of which you shall force him either by art or strength: And thus much for the Chace or hunting of the Stagge.

Of the
Buck.

Now for the hunting of the Buck: forasmuch as they are most usually kept in parks, and that every Keeper, which is worthy to be a Keeper, may sooner from his own experience then from any Reading, get the experience of the ground hee rendeth, and sith hee is bound both by the Law of Huntsmen and good manners, to give every Man permission, that is priviledged to hunt in his ground, to hunt for Buck, as well, cannot hunt a Buck, then hee can write of it, but hee can hear of it.

Of the
Hare.

Touching the Hare, it is a creature of great use to Mans, and good Mans, and is a creature of great use to the headiest and most industrious, and is a creature of great use to the good profit for Mans. The Hare is a creature of great use to the little, yet are the members worthie mention, as the flesh, which is good for all manner of Flux, the brain good to make children breed their teeth with ease, the wool excellent to stanch blood; the Gall soveraign for sore eyes, the blood which will kill Rheume, and Worms; the stifling bone, which being worn, taketh away the pain of the Cramp, with many other good things besides.

Of her
profits.

The hun-
ting of the
Hare.

Touching the hunting of the Hare, you are first to regard the place of hunting, as whether it be in Woods, or Champain: if in Woods, you shall not cast off your dogs in the thickest of the covert, but rather beat the bush close or shrubby ground near adjoining to the cover: for though in the Woods you may sooner find a Hare; yet commonly you shall find such change therewithall, that you shall hardly bring any forth to worth your pleasure, where, on the contrary part, if you find any in those neighbouring grounds, she will presently fly forth into the champaine: because naturally a Hare will refuse the covert, till shee begin to be weary; and a Hare being once heated, is not so easily

Where to
find hares.

fly

sily lost, upon a fresh change, as when the sent is of equal coolness. If you hunt in the champaine, you shall first beat those places which are most likely, as where Gorse or Whinnes grow, or in grounds that are all tusks of rushes, short linge, bramble bushes, or such like: or if the champain be more plain and void of such places, then you shall at the beginning of the year repair to the shrubs, about Christmas to the fallows and in *March* to the green Corn: for those are the most usual hounts for the best Hares, and in all these places you shall regard the Form, or Hares seat well, and know whether it be old or new, as if the Form be plain and smooth within, the pad before it flat and worn, and the pricks so new, and easie to be seen, that the earth appear black, and as it were presently broken, then is the Form new, and if the Hounds call upon it, then may you hunt from thence, and upon the trail recover that Hare: but if the Form look old and rough within, and the pad it self be not smooth, nor any pricks to be discerned therein, then it is old, and if the Hounds call upon it, you shall rare them, for the sent is old, and all the labour will be lost you spend upon it.

The knowledge of the Hares Form.

The next thing you observe must be the shifts and sleights of the Hare, when she is wearily hunted, as her doublings and windings, and at every default give the Hounds leisure enough and compasse enough in the chasing about of your rings for the unwinding of the game, then you shall observe her leaps and skips before she squat, and beat all those places very curiously which are likely to give her any harbour, and though the losse seem never so dangerous, yet not to be discouraged, but to continue your search, because when she cometh to those hard shifts she is at the last ast, and cannot stand long before the Hounds. Many other circumstances there are, but they are so generally known to almost every man that any way affecteth this pleasure, that it is needlesse to make further relation thereof; and therefore I hold this sufficient for the hunting of the Hare.

The Hares sleights and shifts.

Now for the hunting of the Fox, or Badger, they are chases of a great deal lesse use, or cunning then any of the former, because they are of much hotter sent, as being inticuled stinking sent and not sweet sent, and indeed very few Dogs but will hunt them

The hunting of the Fox or Badger.

with

with all eagernesse ; therefore I will not stand much upon them, but advise you to respect well their haunts and coverts , which commonly is in Woods and bushy places, and to take knowledge of their earths, and Kennels, and as near as you can when you go about to hunt them, to stop up their Kennels, and keep them out that sling forth, that they may be the sooner brought to their destruction : the chase is profitable and pleasant for the time, inso-much as there are not so many defaults, but a continuing sport ; yet not so much desired as the rest, because there is not so much art and cunning ; and thus much for chases, and the general use of all kind of hunting.

The end of Hunting.

of



Of Hawking.

CHAP. V.

*Of Hawking, with all sorts of Hawks, and the whole
Art thereof.*



D your English Husband-man shall for his Recreation, chuse the pleasure of Hawking which is a most Princely and serious delight; he shall understand that all Hawks are divided into two kinds, the long winged Hawk, and the short: the long winged Hawks which are meet for our Husbandmans recreation, are the *Faulcon gentle*, and her *Tercell*; the *Gerfaulcon* and her *Genkin*; the *Sake*, the *Lanner*, the *Barbary Faulcon*, the *Merlin*, and the *Hobby*: and the short winged Hawks, Kinds of hawks. are the *Goshake*, the *Tercell* of the *Goshake*, the *Sparrowhawk*, and the *Musket*.

The *Faulcon gentle*, which is the principall of Hawks may be made either for the field or river, and will flie at the Partridge, or at the Mallard; the *Gerfaulcon* will flie either at the Herron; The flight of hawks. the *Saker* at the Crane or Bitter; the *Lanner* will flie at the Partridge, Pheasant, or Chooffe; the *Barbary Faulcon* at the Partridge only; the *Merlin* and the *Hobby* at the Lark, or any small bird whatsoever; the *Goshawk* or *Tercell* of *Goshawk*, at the Partridge, Pheasant, or Hare; the *Sparrowhawk* at the Partridge or Black bird, and the *Musket* at the Bush only; and all these Hawks are hardy, meek, and loving to the man.

The manning
of hawks.

All Hawk generally are manned after one manner, that is to say, by watching and keeping them from sleep, by a continually carrying them upon your fist, and by a most familiar stroaking and playing with them, with the wing of a dead fowl, or such like, and by often gazing and looking them in the face, with a loving and gentle countenance, and so making them acquainted with the man.

Of Luring
hawks.

After your Hawks are manned, you shall bring them to the Lure by easie degrees, as first, making them jump unto the fist, after fall upon the Lure, then come to the voice, and lastly, to know the voyce and Lure so perfectly, that either upon the sound of the one, or sight of the other, she will presently come in, and be most obedient, which may easily be performed, by giving her reward when she doth your pleasure, and making her fast when she disobeyeth: short-wing'd hawks shall be called to the fist only, and not to the Lure; neither shall you use unto them, the loudnesse and variety of voice, which you do to the long winged Hawks, but only bring them to the fist by chirping your lips together, or else by the whistle: And in this manner of Luring, and calling of hawks, (for short-winged hawks are said to be called, and not Lured) you shall specially acquaint your hawk with three things: First boldnesse and acquaintance with men, dogs and horses; then that she be eager and sharp set before the Lure be shewed her, knowing both the morning and evening hours of her luring; and lastly, to delight her the more with the Lure, to have it ever garnished on both sides with warm and bloody meat.

The bathing
of hawks.

When your Hawks are thoroughly manned and lured, and are come to the height of flesh and good lust, you shall then spy out a fair day when the weather and aire is most temperate, and carry your hawk to some fair, little, shallow, sandy, running brook, or Rundle, where the water is quiet and still, and where your hawk may stand up to the mid thigh therein, and having prickt her down, and made her fast hard by the verdge thereof, you shall take off her hood, and go a little way from her, and see whether she will bathe therein; but if you find her fearful of the water, you shall with a little stick paddle in the water a while before

before her, and then depart from her again, and let her then bathe therein as long as she pleaseth: this done, you shall take her upon your fist, and give her a bit or two of meat, then hold her in the Sun, and let her pick, prune, and dry her selfe again: if you cannot come to any River, Brook, or Rundle conveniently, then you should provide either a large bason, or a broad shallow tub, and so in it let your hawk bathe as oft as occasion shall serve, for this bathing giveth a hawk courage, boldnesse, and a great appetite, and would commonly be used the day or morning before any flight: If it be in the winter that your hawk batheth, when no Sun shineth, you may then dry her as well by the gentle air of the fire as otherwise.

To enscame your Hawk, which is to cleanse her from grease, Of enscaming
fat and glut, which lieth inwardly in her body, and which you giving, casting
shall know by her round thighs, her flesh, and full mewings, and scouring.
then when you feed her in the morning, give her a bit or two of hot meat, and the night following little or nothing; then morning and evening after, feed her upon the flesh of a Rook washt in two waters, till you feel the pinions of her wings more tender then they were before, then give her casting according to her nature, as was before shewed, and once in two or three dayes give her a hens neck well jointed and washt in water, which will by the sharpnesse thereof break the kels and filmes of fat which are in her body; then every morning you shall give her a quick traine Pidgeon, and keep her so long upon her wing, that by her own moderate exercise, she may melt and dissolve the grease that moultheth her, which after it is broken, you may take away, by giving her three or four pellets of the root of Sellandine, as big as garden pease, well washt and scoured, and if you steep those pellets in the syrup of Roses, the scouring is much stronger.

When your Hawk is manned, lured, and enscamed, you shall then bring her to her flight, which if it be at the Pheasant or Partridge in woody and close grounds, then you shall when you lure the hawk, cast your lure into some low Tree or Bush, that thereby you may bring her to take the stand; which when she doth, you shall then draw out your lure, and giving her notice thereof, make her seize thereon, and ever feed her on

Of flying at
the Pheasant
or Partridge.

the ground, and under a bush, the practice whereof will bring her to delight in the stand; and to mark all the advantages which she shall get from thence; then bringing her to either Pheasant or Partridge, make her flie at a young one first, that being more foolish, and easier slain, she may take delight in her conquest. But if you flie any long winged Hawk in the champane, then you shall by all means possible keep her from the stand, and only maintain her upon her wing, till you spring the Partridge underneath her, and then stooping upon the advantage, the prey can hardly escape her: yet for the more sure killing of the game, and entring of young Hawks, you shall first spring the Partridge and mark them, then being come to the mark, cast off your Hawk, and when she is gotten to the height of her gate, lay in your Spannels, and then retriving the Partridge underneath her after the first flight, it is impossible she should escape: And in this sort you may flie all manner of long-winged Hawks, for it is not proper to flie them from the fist, although most of our late Faulconers now adayes use it; but for your short-winged Hawks, you shall flie them from the fist only: And therefore to make them hardy and valiant, you shall first enter them at an old field Partridge, laid in a hole, and covered either with a sodde, board, or hat, at which you shall fasten a small Creance, and then uncoupling your Spannels, as they are ranging about, suddenly, when your Hawks bead is towards the Partridge, pluck off the sodde or hat, and let the train go, and the Hawk after it, which as soon as she hath slain, reward her very well, and thus doing twice or thrice, you may after venter to flie her at your pleasure.

Of flying at
souls.

To make your Hawk flie at soule, which is called the flight at the River, you shall first whistle off an approved well quarried Hawk that is a sure killer, and let her cnew the soule so long, till she bring it to the plunge: then take her down and reward her, and set her by, yet so as you may have her ready to use at your pleasure, then whistle off your young Hawk, and when she is at the height of her gate, and that you have shewed her water divers times to make her the more inward, and by a gibbet call'd her in, when at any time she hath looked out. Then being just over the fowl, make in with all your company on every side the

River,

River, and so lay forth the fowle, which if your Hawk stoop, strike, and trusse, you shall presently make into her, and help her, and then crossing the foules wings, or breaking them, let your Hawk take her pleasure thereon, but if she do not slay the foule at the first stooping, then you shall give your hawk pleasure to recover her gate again, and then lay forth the foul as before, not leaving thus to do till you have landed it, and that the Hawk hath slain it, and then reward her as aforesaid: But if such a mischief shall fall out that the foul do scape and break away: then you shall be sure to have a little Mallard ready in your bag, which you may cast forth, and so reward your Hawk thereon.

If your long-winged Hawk flying at the River, or in champagne fields, use to take stand, which is a foule fault, you shall first by all means sh in flying neer Trees or Covert: but if that do not suffice, then you shall have divers trains in divers mens hands, and when the Hawk offers to go to the stand, let him which is next her cast out his train, and she kill it, reward her: this doing once or twice will reclaim her, or nothing.

Helps for faults in long winged hawks and first of the stand.

If your Hawk through pride of greafe or otherwise, be forward and coy, you shall not when she kills, reward her as you were wont, but conveying some other cold meat cunningly under her, let her take her pleasure thereon; and ever with the meat give her some feathers which may scowre her, and make her to cast, for this will recover her stomack, and make her more carefull and diligent.

Against forwardness.

If your Hawk be of a wild and stirring nature, and will not look inward towards the man with her head, but rake and gaze after every check, neither respecting whooping or gibbetting, in this case you must follow her and lure her back, and as soon as she turneth in her head, shew her the lure, to which if she stoop, then presently reward her, and thus do so oft as she rangeth, till she be brought unto that Love to your voice and affection to the Lure, that she vwill forget her other extravagant thoughts.

To make a hawk look inward.

When your Hawk is brought to flie to an extraordinary high pitch, to maintain and keep her in the same manner of flying still, you shall not flie her above one flight in a day at the most:

for nothing bringeth her down more then over wearinesse: Also you shall not then keep too extream a straight hand upon her, for the too much greedinesse of the Quarry makes her slacke her flying. Also, you shall not flie her upon Rundles, or small brooks, but upon plashes and broad Rivers; you shall not suffer her to flie too long, but after two or three sloopings, and a crossing, although she misse it, take her down with the Lure or train, and reward her, for this encouragement will maintain her in her goodnesse.

To bring
hawks up-
ward.

If your hawke be high flying, yet sloathful to go to her Gatte, or else now and then slooping before there be cause, and so losing her way, which many times happeneth when either the hawk is kept too sharp, or flown out of her due time; any of which faults when you perceive, you shall then upon the doing thereof give her a dead Quarry, and then hood her up without reward, and an hour or two after, call her to the Lure and feed her: and thus do as oft as she offendeth: yet for the more sure prevention thereof, I would have every Faulconer to try the naturall disposition of his hawk, and find whether she flyeth better on a streight hand, or an open, and whether early or late, and so forth, and according to her own nature, ever to keep her.

Faults in
short winged
hawks, is it of
turning tail.

Short winged Hawks, as *Goshawks* and *Sparrow-hawks*, will many times neither kill their Game, nor flie their Game to mark; but will give it over after a little flying, and (as Faulconers term it) turn tail to it, which when you see, you shall encourage your dogs to hunt and cast before your hawk a train Partridge, as it were the wild one, and make her seize it, and feed well upon it, to encourage her the better; and thus do twice or thrice, which if you see it prevail not, then esteem her not, but make her away, for she will hardly ever be reclaimed.

If a hawk will
not flie at all.

Hawks that have never been acquainted with prey, will many times not flie at all; but taking a tree, will sit and look after the game, which fault to amend, you shall ever feed her upon quick Birds, and make her foot them, and then going into the field, which is champane and plain, after you have rid up and down a pretty space with the hawk unhooded, you shall cause one of your company to cast out a field Partridge before your hawk. Then

let her flie at it, and so soon as she hath footed it, let her feed thereon at her pleasure, and do thus three or four times, till she be well in blood, and you shall find her valiant quickly.

If your hawk be so fond of the man, that she will not flie from him, but after a stroke or two, return to him again; you must then but seldom be familiar with her, and let her rather feed her selfe then be fed by you, and as oft as she cometh so improperly unto you, you shall give her no reward; but when she forsaketh you, and killeth the game, then you shall well reward her, and then make her both familiar with men, dogs, and horses; for to take joy or dislike to any of them, is a mischief a great deal worse then the former.

Too much
fondnesse of
the man.

To speak of the mewing of long winged hawk; you shall understand that she may be set down, that is, put into the mew about the middle of *April*, at which time if you find they have any lice, you shall pepper them, and put them into the Mew, which if it be a low place upon the ground free from noise, vermine, or any evill air, then it is called mewing at the stone or stock, but if you mew in any high room with open windowes towards the *North*, or *North-east*, then it is called mewing at large: If you mew at the stock, you shall have a broad Table in the midst of the room, on which you must place sand, gravel, stone, sods, and tubs for water, and in the midst of these a free-stone or block of two foot high, to which you shall fasten your hawk with a turvell of iron, so that at no time her leafe may be intangled; this manner of mewing may be in the Faulconers own bed-chamber, or in any other safe room at his pleasure; the best meat in the mew, is any quickbirds or fowl, dogs flesh, and such like: If you mew your hawk at large, you shall put her loose into the mew, having sundry perches therein, some high, some low for her use to sit on; and in this mew also you shall have sand, stones, gravel, green sods, and water, all which you shall renew as oft as need do require, and in the midst of them a block or two, whereon to tie her meat, which meat shall be the same formerly sp. k: of, and given at certain and due times, without fail or alteration.

Mewing of
long winged
hawks.

Mewing at
the stone.

Mewing at
large.

If you intend to mew a short winged hawk, as the Goshawk, or such like, you shall in *March* after you have scowred her, and made

made her clean from lice, cut off her the lesse, and throw her into Mew loose, either in a high room or a low room at your pleasure; let her perches be lined with canvasse, or with woollen lifts for the safety of her feet, let her have store of water for bathing, and oft renewed, and store of meat, as live Pigeons, warm Mutton, warm Goat, or Dogs-flesh, any of which will make her mew quickly.

When to
draw hawks.

Hawks for the field would be drawn from the mew in *June*, and made ready to flie in *August*, at which time Corn is cut, and Game is strong: and hawkes for the River would be drawn in *August*, that they may be ready to flie in *September*.

Diseases in
hawks.

Hawkes have divers infirmities and diseases, as Feavers, Paley, Impostumes, sore eyes, and Nares, Megrim, Pantas, casting her Gorge, foulness of Gorge, Wormes, Fillanders, ill Liver, or Cout, Pinne in the foot, breaking the pounce, Bones out of joint, Bones broken, Bruises, Lice, Colds, Frounce, Fistulae, Stone, much gaping, more foundring, privy evill, taint in the Feathers, loss of appetite, broken wind, blow on the Wing, wounds, swelling, eating their own feet, taking up of veins in Hawks, Cramp, and a world of others: all which forasmuch as I have shewed the Medicines, and cures thereof in the former Treatise called *Cheap and Good*, I will refer you unto the same, and not doubt but it will give you satisfaction.

CHAP. VI.

*Of Courting with Grey-hounds, and the Excellencies
of that sport.*

Of courting
with Grey-
hounds.

NOW if the mind of our Hu bandman be not so generally taken with the delight and pleasure of this recreation of Hawking, but that he preferreth before it the delight of Courting with Grey-hounds, which is a very noble and worthy pastime, he shall in it observe these four things, the Breed of Grey-hounds, their shape, their diet, and the Lawes belonging to the same.

Breeding of
Greyhounds.

Touching the breed of Grey hounds, you are principally to respect the Countries in which they are bred, and nourished

rished, as that it be a champagne plain, and without covert, where a hare may stand forth, and indure a course of two miles, or more, as it shall happen (for the courling of a hare is that which I purpose most to entreat of) because in a close country full of covert, where a hare cannot run above a quarter of a mile, or lesse, both the pleasure of the recreation is taken away, and the Greyhound by an insufficient exercise is made unapt, and unfit for that for which he was created.

Now of champagne countries, they are of three kinds, as the Best places low vales, as are the vales of *Belvoir*, the vale of white *Hors*, for breed. the vale of *Egham*, and such like; the high downs and heaths, as about *Salisbury*, *Ciſſeter*, *Lincoln*, and many such like places. and the middle between both, as the Country of *Northampton* and *Leicester*, and other like them: All which are very excellent places for the breeding and training up of the best Greyhounds; yet of the three your vallies or middle soyles, which for the most part are arable grounds, are much better to breed and train on, then your downs and heaths, because they are much more labourſome, rough, heavy, and in the winter season full of much trouble and false root-hold, inſomuch, that a dog which is able to run strongly, swiftly, and ſurely there, muſt neceſſarily do it ten times better when he comes to the ſmooth plain, and carpet-like down: where on the contrary, the dogge which is trained upon thoſe even downs, though he be right famous and excellent, when he comes to run in the deep well plowed field, is to ſeek where to beſtow his feet, and can neither ſhew ſpeed, cunning, nor indurance.

Now the Gentlemen which dwell on the downs and plain grounds, to maintain the reputation of their dogs, affirm them to be much more nimble and cunning in turning, then the vale dog: be, because the fairneſſe of earth giveth them ſo much advantage over the hare, that having her even (as it were) in a manner under their feet, ſhe is put more to her ſhifts, and ſtrives with greater art of ſleights to deceive, and get advantage of the Greyhound: And it is true, for hy reaſon of the advantage of their hills, which are gent and ſteep, though ſmooth and plain, I have ſeen a vale-dog ſo much deceived, that upon a turn, he hath loſt more ground then hath been recoverable in the whole course

course after: but there is no want of goodnesse, but a little skill, which a months coursing will bring a dog so sufficiently unto, that he wil' not need any other reformation, then the knowledge of his errour, by his loss of labour. So that I conclude the good dog upon the deeps, will ever beat the good dogs on the plain.

Difference between Doggs and Bitches.

It is an old received opinion amongst many men of the Leash, that the Grey hound bitch, will ever beat the Grey-hound dog, by reason of her more nimblenesse, quicknesse and agility: And it is sometimes seen, that a perfect good bitch indeed, hath much advantage of an ordinary dog: but if the good dog meet with the good bitch, there is then no comparison but the dog will be her Master; in as much as he exceedeth her both in length and strength, the two main helps in coursing; for her nimblenesse is then no help: sith a good dog in the turn, will lose as little ground, as any bitch whatsoever.

Dogs and Bitches for breed

Yet thus much I would perswade all Gentlemen of the Leash to be very careful in their breeding, to breed upon the best bitches they can provide; for it is found in experience, that the best dog upon an indifferent bitch, will not get so good a whelp, as an indifferent dog upon the best bitch: And amongst these observations in breeding Grey-hounds, you shall observe to have your dogs and bitches of equal and indifferent ages, as about three or four years old at the most; but in case of need, your bitch will endure a great deal longer then your dog, and to breed with a young dog, or an old bitch, may bring forth an excellent whelp.

The shapes of Greyhounds.

Touching the shapes of Greyhounds (from whence you shall take the best collections for their goodnesse) they are certain and most infallible: Therefore touching Greyhounds, when they are puppies or young whelps, those which are most raw-bon'd, lean, loose made, sickle or crooked thought, and generally unknit in every member, are ever likely to make the best dogs, and most shapely: but such as in the first three or four months are round, and close trust; fat, streight, and as it were full sum'd and knit in every member, never prove good, swift, or comely.

Now after your dog comes to full growth, as at a year and a halfe, or two years old, he would then have a fine long lean head

head, with a sharp nose, ruff grown from the Eye downward: A full clear eye with long Eyelids, a sharp ear, short and close falling, a long neck a little bending, with a loose hanging wezand, a broad breast, strait fore-legs, side hollow, ribs straight, a square and flat back, short and strong fillets, a broad space between the Hips, a strong stearn or tayle, and a round foot, and good large clifts. Now for the better help of your memory I will give you an o'd rime, left by your fore-Fathers, from which you shall understand the true shapes of a perfect Greyhound, and this it is.

*If you will have a good tike,
Of which there are few like,
He must be headed like a snake,
Neck like a Drake,
Backe like a beam,
Sided like a bream,
Tayled like a Rat,
And footed like a Cat.*

These being the principall members of a good Greyhound, if they resemble the proportions of the things above named, the dog cannot chuse but be most perfect.

When you have thus a perfect and well shap'd Greyhound, Dyeting of Greyhounds to course. your next rule is to apply your selfe to the dyeting and ordering of him, for the pleasure to which you keep him; that bringing him to the uttermost height or strength of wind, you may know the uttermost goodnesse that is within him, which, disorderly and foul keeping will conceale, and you lose a Jewell for want of knowledge of the value.

Dyeting then of Greyhounds consisteth in four especial things, Of what dieting consisteth. Of what diet, food, exercise, airing, and kennelling; the first nourishing the body, the second the limbs, the third the wind, and the last the spirits.

To speak then of food, it is two-fold, either generall, or Of food. particular; general as for a continuall upholding and maintaining of a dog in good state of body, being in good plight and liking; or particular, when a dog is either poore, sick,

or prepared for wager, standeth in need of particular foods of advantage.

Of generall
food.

The best generall food for the ordinary upholding of a dog in a good state is. chippings, crusts of bread, soft tender bones or gristles of Veale, Lamb, or such like, first scalded in beefe-broth not very salt, or other broth, in which hath been boiled, Mutton, Veal, or Venison, or any kind of Pullen, or for want thereof, other clean scalding water. After your chippings or bread is scalded, you shall let it stand and coole, then when your feeding-hour cometh, you shall take as much good milk, flaxen milk, or butter milk (but the best is most wholesome) as will fully or more then whiten the same: for it is to be intended that your water must be all drunk up into your bread, and your milk must only make it swim, and with this feed your dog morning and evening after you come from walking him, and give him a good and sufficient meal thereof, for this will only maintain and uphold him in good state of body, being strong and lusty in flesh before.

Of particular
food.

For particular food, which is when a dogge is poore, sick, or to be prepared for wager, they be these: First, if he be poor in flesh, sickly or weak, the best food you can raise him up withall, is to take sheeps heads, wool and all, clean wash, and break them all to pieces; then put them in a Cauldron or Kettle, and after the water hath risen, and is clean scum'd put unto it good store of Oatmeal and sweet pot-herbs small chopt together, and so boil it till the flesh be tender; then with this meat and the portage feed your Grey-hound morning and evening, and it will soon put him into great lust and strength: but if you will prepare him for match and wager, then you shall make him this diet-bread: take a peck of the finest and dryest Oatmeal, and two pecks of good wheat; and having ground them together, bould the meal through a fine boulding cloath, and then scattering amongst it a pretty quantity of Any-seeds and Licoras well beaten together, knead it up with the whites of eggs, new Ale and barm mixt together, and so bake it in pretty round loaves reasonable hard: with this bread either scalded, as was before shewed in your chippings, or put into the portage with sheeps heads warm, feed your dog morning and evening, to wit half an hour after Sun-rise, and half an hour before
Sun

Food for a
match.

Hours of
feeding.

Sun-set, when you come from walking or airing him, and it will bring him to exceeding great strength of body, and purenesse of wind.

For the exercise of your Greyhound, it consisteth likewise in two things, coursing and airing; and they be every way as necessary as is food, because it only bringeth ability to his limbs, and peritnesse to his wind: to speak then of coursing, you shall not faile to course him at least twice a week, if your courses be strong and long: but thrice a week if they be but reasonable as a mile, or a mile and a half at most: and sometimes if your courses be short, under a mile. In coursing you shall observe two things, blood and labour: blood, which is a heartning and animating of your dog to delight in the pleasure, when he finds the reward of his pains taking; for if a dog course continually, and never kill the hare, the sport will grow irksome unto him, and therefore now and then give him such advantage, that he may kill the hare: then labour, which is contrary to killing; for in it you must give the hare all indifferent advantage both by Law and otherwise, whereby she may stand long before the dog, and make him shew his uttermost strength before he be able to reach her.

Of exercise by coursing.

After your dog hath coursed, if he kill, you shall by no means suffer him to break the hare; but having taken her from him, first cleanse his mouth and chaps from the wool of the hare. and then give him to eat, the Liver, Lights and heart, and so take him up in your leace, lead him home, and there first wash his feet in a little butter and beer, and so put him up in the kennell, and halfe an hour after feed him: for upon his coursing dayes, you must by no means give him any meat more then a white-bread toast and butter, or a toast and oyle, which must be given before his morning-ayring, and so kennelled till he go to his course.

Of ordering dogs.

Touching ayring or walking of Grey hounds, which is a great nourisher and encrease of wind, it must duly be done every morning before Sun-rise, and every evening before or after Sun-set, in this manner: as soon as you have opened your kennel, and rubb'd your dog over with a clean hair cloath, you shall let him play a little about you, before the kennel door, then

Airing after coursing.

take him up in your leash and walk him forth in the field, where for the most part are not sheep or other small Cattell, which they may out of wantonnesse indanger, and there let him loose, and give him leave to play and scop: about you, so that he may skummer, pisse, and empty his body; which when he hath done sufficiently, you shall then take him up in the leash again, and so walk him home and kennell him: this you shall doe after the same manner in the evening; and also if your dog be strong and lusty at night after supper, and then bringing him home bring him to the fire, and there let him stretch and beak himselfe, and with your hand grope and cleanse him from ticks, and other filth, which done, lead him to the kennel, and shut him up for all night.

Of kennel-
ling the
Greyhound.

Now for the kennelling of Greyhounds, it is a right necessary action, and must be performed with all diligence, for it breeds in dogs, lust, spirit and nimbleness, prevents divers mischances, and keeps the powers from spending, till time of necessity: and therefore you shall by no means suffer your dog to be out of the kennel, but in the hours of feeding, walking coursing or when you have other necessary businesses to do about him.

CHAP. VII.

The Lawes of the Leash or coursing, as they were commanded, allowed, and subscribed by Thomas late Duke of Norfolk, in the Reign of Queen Elizabeth.

NOW lastly touching the Lawes of the Leash, or coursing, though they be uncertainly received, and alter with mens various opinions, yet these under written were held for authentical once, and invented, received and subscribed unto by many noble and worthy Personages, suting fully with the Reasons and grounds of the pastime.

First therefore it was ordered, that he which was chosen Fewterer, or letter-loose of the Greyhounds, should receive the Greyhounds match to run together into his Leash, as soon as he came into the field, and to follow next to the Hare-finder till he came unto the Forme: and no horsemen, nor footman,

on

on paine of disgrace, to go before them, or on either side, but directly behind, the space of forty yeards, or there abouts.

Item, That not above one brace of Greyhounds do course a hare at one instant.

Item, That the hare-finder should give the hare three fo-hows before he put her from her Lear, to make the Greyhounds gaze and attend her rising.

Item, That the Fewterer shall give the hare twelve score Law, ere he loose the Greyhounds, except it be in danger of losing sight.

Item, That dog that giveth the first turn, if after the turn be given, there be neither coat, slip, nor wrench extraordinary, then he which gave the first turn shall be held to win the wager.

Item, If one dog give the first turn, and the other bear the hare, then he which bore the hare shall win.

Item, If one dog give both the first turn and last turn, and no other advantage between them, that odd turn shall win the wager.

Item, That a coat shall be more then two turns, and a go-by, or the bearing of the hare, equal with two turns.

Item, If neither dog turn the hare, then he which leadeth last, at the covert, shall be held to win the wager.

Item, If one dog turn the hare, serve himselfe, and turn her again, those two turns shall be as much as a coat.

Item, If all the course be equall, then he only which bears the hare shall win; and if she be not born, then the course must be adjudged dead.

Item, if he which comes first into the death of the hare, takes her up and saves her from breaking, cherisheth the dogs, and cleanseth their mouths from the wool, or other filth of the Hare, for such courtesie done, he shall in courtesie challenge the hare, but not doing it, he shall have no right, priviledge or title therein.

Item, If any dog shall take a fall in the course, and yet perform his part, he shall challenge advantage of a turn more then he giveth.

Item,

Item, If one dog turn the Hare, serve him selfe, and give divers coats, yet in the end stand still in the field, the other dog without turn giving, running home to the covert, that dog which stood still in the field, shall be then adjudged to lose the wager.

Item, If any man shall ride over a dog, and overthrow him in his course (though the dog were the worse dog in opinion) yet the party for the offence, shall either receive the disgrace of the field, or pay the wager; for between the parties, it shall be adjudged no course.

Item, Those which are chosen Judges of the Leash, shall give their judgements presently before they depart from the field, or else he, in whose default it lyeth, shall pay the wager, by a generall voice and sentence.

And thus much for the Lawes of Coursing, and those particularities which do depend thereupon: All which, I submit unto the correction and amendment of those Worthy, and well-knowing Gentlemen who having the Office of the Leash conferred upon them, have both Authority and Power to make Lawes therein, according unto the Customes of Countries, and the Rule of Reason.

The end of Hunting.



Of Particular Recreations.

CHAP. VIII.

Of Divers other particular Recreations.



Here be many other particular Recreations necessary for the knowledge and practice of our Husbandman, as first, shooting in the Long-bow, which is both healthfull for the Body, and necessary for the Common wealth: the first, extending the Limbs and making them plyant: the other, enabling strength fit to preserve and defend his Country: And first,

for shooting in the Long-bow, a man must observe these few Rules, first that he have a good Eye to behold and discern his mark, a knowing judgment to understand the distance of ground, to take the true advantage of a side wind, and to know in what compass his Arrow must flye, and a quick dexterity to give his Shift a strong, sharp, and suddain loose: he must in the action it self stand fair, comely, and upright with his body, his Left foot a convenient stride before his Right, both his hammes stiff, his left arme holding his Bow in the midst stretcht streight out, and his Right arm with his three first fingers and his thumb drawing the string to his right ear, the notch of his arrow resting between his fore-finger, and long finger, of his right hand,

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and

and the steal of his Arrow below the feathers upon the middle knuckle of his fore-finger on his left hand, he shall draw his Arrow up close unto the head and deliver it on the instant without hanging on the string ; the best Bow is either Spanish or English Yew, and the worst of Withen or Elme ; the best shaft is of Burch, Sugar-chest, or Brazel ; and the best feathers gray or white.

The Markes to shoot at are three, Butts, Pricks, or Rovers ; the Butt is a levell Marke, and therefore would have a strong Arrow with a very broad Feather : The Prick is a Mark of some compasse, yet most certain in the distance, therefore would have nimble strong Arrows with a middle feather, all of one weight and flying ; the Rover is a Mark uncertain, sometimes long sometimes short, and therefore must have arrows lighter or heavier, according unto the distance of place.

Of Shooting
in Crosse-
bowes.

If infirmity in the arme, or back, take from a man the use of the Long-bow, he may then with a Cross-bow made for gasl carried upon a string, and the neather end placed in a rest, with arrowes made strong, heavy, and suitable to the strength of the Bow, shoot at all the former Marks, and reap the same pleasure he formerly did with his long bow.

Of Bowling

There is another Recreation, which howsoever unlawfull in the abuse thereof, yet exercised with moderation, is even of Physicians themselves held exceeding wholsome, and hath been prescribed for a Recreation to great Persons, and that is bowling, in which a man shall find great Art in choosing out his Ground, and preventing the Winding Hanging, and many turning advantages of the same, whether it be in open wide places, or in close Allies : And this sport the choosing of the bowl is the greatest cunning : your flat bowls being the best for close Allies : your round byassed bowls for open grounds of advantage, and your round bowles like a ball, for green swarths that are plain and levell.

Not inferiour to these sports, either for health or action, are the Tennis, or Balloon ; the first being a pastime in close or open Courts, striking a little round ball to and fro, either with the palmes of the hand, or with Racket. The other a strong and improving sport, in the open field, with a great ball of double Leather

fill'd with wind, and so driven to and fro with the strength of a mans Arm, arm'd in a bracer of wood ; either of which actions, must be learnt by the Eye and practice, not by the Ear or Reading.



Of Angling, &c.

CHAP. IX.

The whole art of Angling ; as it was written in a small Treatise in Rime, and now for the better understanding of the Reader put into Prose, and adorned and enlarged. And first of Angling, the vertue, use, and Antiquity.



Since Pleasure is a Rapture, or power in th's last Age, stoln into the hearts of men, and there lodged up with such a careful guard & attendance, that nothing is more Supream, or ruleth with greater strength in their affections ; and since all are now become the Sons of Pleasure, and every good is measured by the delight it produceth : what worke unto men can be more thankfull then a discourse of that pleasure which is most comly, most honest, and giveth the most liberty to Divine Meditation ? and that without all question is the Art of Angling, which having ever been most hurtlessly necessary, hath been the sport, or Recreation of God's Saints, of most holy Fathers, and of many worthy and Reverend Divines, both dead, and at this time breathing.

For the use thereof (in its own true and unabused nature) The use of Angling.

rieth in it neither covetousness, deceit, nor anger, the three main spirits which ever (in some ill measure) rule in all other pastimes: neither are alone predominant without the attendance of their several handmaids, as Theft, Blasphemy, or Blood shed: for in Dice-play, Cards, Bowls, or any other sport where money is the goal to which mens minds are directed, what can mans avarice there be accounted other then a familiar Robbery, each seeking by deceit to couzen and spoyle others of that blisse of meanes which God hath bestowed to support them and their families. And as in every contention there must be a better-hood or super-excelling, so in this, when the weaker deceipt is deprived his expectation, how doth it then fall into Curses, Oathes, and furies, such as would make Vertue tremble with the imaginations!

But in this Art of Angling there is no such evil, no such sinful violence, for the greatest things it coveteth, is for much labour a little Fish, hardly so much as will suffice Nature in a reasonable stomack: for the Angler must intice, not command his reward; and, that which is worthy millions to his contentment, another may buy for a groat in the Market. His deceipt worketh not upon men, but upon those creatures whom it is lawfull to beguile for our honest Recreations or needfull use; and for all rage and fury it must be so great a stranger to this civill pastime, that if it come but within view or speculation thereof, it is no more to be esteemed a pleasure: For every proper good thereof in the very instant faileth, shewing unto all men that will undergo any delight therein, that it was first invented, taught, and shall for ever be maintained by Patience onely. And yet I may not say, onely Patience; for her other three Sisters have likewise a commanding in this exercise, for Justice directeth and appoynteth out those places where men may with liberty use their sport, and neither do injury to their Neighbours, nor incur the censure of incivility. Temperance layeth down the measure of the action and moderateth desire in such good proportion, that no Excesse is found in the over-flow of their affections. Lastly, Fortitude inableth the mind to undergo the travail and exchange of Weathers, with a healthfull ease, and not to despair with a little expence of time, but to preserve with a constant imagination.

nation in the end to obtain both pleasure and satisfaction.

Now for the Antiquity thereof (for all peacemes, like Gen- The Antiquity
try, are held to be most excellenr, which is most antient) it is of Angling.
by some Writers said to be found out by *Deucalion*, and *Pyr-
phus* his Wife, after the General flood others write, it was
the invention of *Saturn*, after the peace concluded betwixt
him and his brother *Titan*; and others, that it came from *Be-
lus* the Sonne of *Nimrod*, who first invented all holy and ver-
tuous Recreations; and all these though they savour of ficti-
on, yet they differ not from truth, for it is most certain, that both
Deucalion, *Saturn*, and *Felus*, are taken for figures of *Noah* and
his Family, and the Invention of the Art of Angling, is truly said
to come from the Sonns of *Seth*, of which *Noah* was most Prin-
cipal. Thus you see it is good, as having no coherence with evill:
worthy of use, in as much as it is mixt with a delightfull profit:
and most antient, as being the Recreation of the first Patriarks;
wherefore now I will proceed to the Art it self, and the means to
attain it.

CHAP. X.

*Of the angle-Rod, Lines, Corks, and other tools for
Angling.*

IN as much as the first Ground Work or Substance of this
Art of Angling consisteth in the implements belonging and
appertaining thereunto, and that except a man be poss:st of them,
which are most exact, nimble, or necessary for the same, his labour
is vain, and to little or no purpose imployed, and for as much as
the Angle Rod is the greatest, principallest, and sole Director of
all other Tools belonging thereunto, I think it not amiss to begin
with the choyce and order thereof, according to the opinions of
the best noted Anglers, which either have been in times past, or
are at this day living.

For the choyce then of your Angle-Rod, you shall under-
stand that some Anglers are of opinion, that the best should
be composed of two pieces, a main body, and a small plyant
top. The Main body would be of a fine grown ground-
Wichin, or a ground Elme, of at least nine or tenne foot in
length, streight, smooth, without knots: and not much differ-

fering, at either end ~~in~~ one substance or thicknesse. It would be gathered at the fall of the leaf, near or about *Al-hollownesse*, and laid up in some dry place, where it may lye straight, and of it self season: For to beat them in the fire (as many do) when they are green, is not so good, but after they be well dried and seasoned of themselves, then to beat them in the fire, and set them so straight and even that an arrow cannot surpasse them, is excellent; then you may take off the upper rind, and what with the shoak, and their own age, their colour will be so dark, that they will give no rest to the Water, (which is a principal observation). Your Rod being made thus straight and seasoned, you shall at the upper end thereof, with an augur, or a hot Iron (but a hot Iron, is the better) burn a hole about three inches deep, and, of a fingers wideness; then on the out-side of the Rod, from the top of the hole unto the bottome, you shall wrap it about either with strong double twisted thred well Waxed or pitcht, or with Shooe-makers thread many times doubled and well waxed with Shooe makers Waxe, and the last end fastned under the last folds, so close and so sure, that it may by no means loose; for this will keep the Rod from cleaving, or breaking in that same place where the hollownesse was made.

Of the top of
the Angled rod.

The stock being thus made you shall into the hole fixe the Top, which would be a very small ground Hazel, growing from the earth upward, very smooth and straight, which would be cut at the latter end of the year and lye in season all the Winter, the upper Rinde being by no meanes taken off, neither the Rod put into the fire at all, but only seasoned in a good dry place, where it may lye straight, and have both the Wind and some Ayre of the Fire to come unto it. This Top must bee plyant and bending, yet of such a sufficient strength, that it will not break with any reasonable jerk, but as it is any way bowed, so to return again to the former straightnesse. This top wand would be of a yard and a half, or an Ell at least in length, and at the smallest end thereof would be fastned with a warp or hair, a strong loop of haire, about an inch long, to which you may at pleasure fasten your fishing

fishing line; and the bigger end of the top must be thrust into the socket of the stock, and made so fast that it may not loosen nor shake out with any shaking or other reasonable violence. And altho the Witchin or Ground Elvie are accounted the best to frame these main stocks of, yet I have seen very good stocks made both of Sallow, Beech, or Poplar: for the lighter your Rod is (so it be strong) it is so much the better, and more for the ease of him that useth it.

There be other approved good Anglers which allow only the Rodde which is composed all of one entire peece, and think them stronger, nimbler, and lesse casual: and these Rods they would have chosen of an excellent streight and well grown Ground-Hazel, being from the bottomie to the top finely Rush-grown, the upper end thereof being small plyant and bending. This Rod should be gathered at the fall of the lease, when the leaves are some fallen and some sticking: as soon as you have cut them up, you shall cut away the leaves and small sprigs, yet not so near that you hurt the bark (for that by no means must be stir'd, as well for the strength of the Rodde, as for the colour, which being dark will not so soon catch the eye of the Fish and offend them.) Then bringing your Rodds home, you shall lay them upon a level floor, and pressing them down with good weights, to keep them from warping, let them lye and season all the Winter: Then in the Spring time take them up for your purpose, which is onely to make the knots smooth, and to fix your loop of hair unto the upper end. Now of these Rods, the longest is the best, so it be streight and well grown; for most commonly they are so short that they will serve to fish with but in little narrow Brooks, or else in a Boat, in great waters.

There be other Anglers, and many of the best and approved judgment, which allow the Angle-Rodde of many peecees: as those which are made of Cane: each peece exceeding another on degree, in such even proportion that being fixed and thrust one within another, they will shew as one even and most streight Rush-grown body, without any crookedness or other outward evill favouredness. These peecees would not bee a-
boye

The Angle Rod of one piece.

The Anglers Rod of many pieces.

bove four foot in length a piece, and three such pieces, which make twelve foot, are sufficient for the stock of the Rodde, besides the top. Now for those ends which are the sockets, into which you fix the other Canes, you shall hoop them about with six plates of Brass, an inch and an half broad, well sodered, and smoothly filed, which will keep the Cane from cleaving: and for the top of this Rodde, the round Whale-bone is thought the best; and surely in my conceit so it is both for this or any other Rodde whatsoever; for it is tough, strong, and most plyant. These Rodds most commonly are made so have the small Canes thrust down into the wide Canes, so that a man may walk with them as with a staff, as when he pleaseth to draw them forth, and use them as occasion shall be offered. The onely exception which is taken at these kind of Rodds, is the bright colour of the Canes, which reflecting into the water, oft times scareth the Fish, and maketh them affraid to bite. But if you Fish in deep and thick waters, there is no such matter, for the shadow of the Rodde is not discerned through the Sunne, only in shallow and clear Brooks it is a little hindrance; and therefore he which is a Master in this Art, will Umber and darken the Rodde, by rubbing it over a gentle fire with a little Capons grease, and brown of Spain, mixt together.

Of the Lines. Now for your Lines, you shall understand that they are to be made of the strongest, longest, and best grown Horse-haire that can be got, not that which groweth on his Main, nor upon the upper part or setting on of his tayle, but that which groweth from the middls and in most part of his dock, and so extendeth it selfe down to the ground, being the biggest and strongest hairs about the Horse: neither are these hairs to be gathered from poor, lean and diseased Jades of litle price or value, but from the fattest, soundest, and proudest Horse you can find, for the best Horse hath ever the best haire; neither would your hairs be gathered from Naggies, Mares, or Geldings, but from ston'd Horses onely, of which the black haire is the worst, the white or gray best, and other colours indifferent. Those lines which you make for small fish, as Gudgeon, Whiting, or Menow, would be composed of three hairs; those

those which you make for *Pearch* or *Trout*, would be of five hairs, and those for the *Chub* or *Barbel*, would be of seven : to those of three hairs, you shall add one thread of silk, to those of five, two threads of silk, and to those of seven, three threads of silk. You shall twist your hairs neither too hard nor too slack, but even so as they may twind and couch close one within another, and no more, without either snarling or gaping one from another ; the end you shall fasten together with a *Fishers knot*, which is your ordinary fast knots, foulded four times about, both under and above, for this will not loose in the water, but being drawn close together, will continue, when all other knots will fail ; for a hair being smooth and stiffe, will yield and goe back, if it be not artificially drawn together. Your ordinary line would be between three and four fadom in length, yet forasmuch as there are diversities in the length of rods, in the depth of waters, and in the places of standing to Angle in, it shall be good to have lines of divers lengths, and to take those which shall be fittest for your purpose.

These lines, though the naturall hairs being white or grey, be not much offensive, yet it shall not be amisse to colour them according to the seasons of the year, for so they will least scare the Fish, and soonest intice them to bite with most greedinesse, and of colours, the best is the water green, which you shall make after this manner. Take a pottle of *Allom-water*, and put thereunto a great handfull of *Marigolds*, and let them boil wel, till a yellow scum rise upon the water, then take halfe a pound of green *Copperas*, and as much *verdigrease*, beaten to fine powder, and put it with the hair into the water, and so let it boil again a pretty space, and then set it by to cool for half a day, then take out your hair, and lay it where it may dry, and you shall see it of a delicate green colour, which indeed is the best water green that may be. This colour is excellent to angle with in all clear waters where the line lies plain, and most discovered, and will continue from the beginning of the spring, to the beginning of winter. Now if you will have your lines of a yellow colour, you shall boyle your hair in *Allom-water*, mixt only with *Marigolds*, and a handfull of *Turmerick* : but if you cannot get *Turmerick*, then you shall stamp so much of green *Walnut-tree leaves*, and mixe

The colour-
ing of Lines.

it with the water, and steep your hair therein twenty and four hours at least.

Lines of this colour are good to Angle with, in waters that are clear, yet full of weeds, sedge, and such like : for it is not unlike to the stalkes of these weeds, and it will well continue to Angle withall, the first part of the winter, as from before Michaelmas, till after Christmas.

If you will have your Lines of a russet colour, you shall take a part of Allom-water, and as much strong Lye, then put there to a handfull of soot, and as much brown of Spain, and after it hath boiled an hour or two, set it by to coole, and when it is cold, steep your hair therein a day and a night, and then hang it up to dry : these coloured lines are good to angle with in all deep waters, whether they be rivers or standing pools, as ponds, and such like, and are most in use from Christmas till after Easter.

Now if you will have your lines of a brown or dusky colour you shall take a pound of Umbes, and half so much soot, and seeth it in a pottle of Ale a good space, then when it is cold, steep your hairs therein a day and a night, and then hang them up to dry, and the colour will be perfect; yet ever the darker you would have it, the more Umber put unto it: these lines are excellent to angle with in waters that are black, deep, and muddy, be they ether running or standing waters, and will continue all seasons of the year whatsoever, only in bright waters they are too black, and cast too large a shadow. Lastly, if you would have your lines of a tawny colour, (although in the water it sheweth almost all one with the other darker colours) you shall take lime and water mix it together, and steep your hair therein half a day, and then take it forth and steep it double so long time in Tanners ouze, and then hang it up to dry, and the colour will be perfect : these lines are best to angle with in moorish and heathy waters, which are of a reddish colour, and will serve for that purpose all seasons of the year : if with this colour or the green, ye mix a silver thread, it will not be amiss : and with the other colours, a gold thread it is good also : and note, that at each end of your line, you make a loop, the one to fasten to the top of your Rod,

Rod, being the larger. and the other to fasten your hook-line unto, which would be somewhat lesser.

After your lines be made, you shall make your corks in this manner: take of the best and thickest cork you can get, and with a fine Razor having pared it smooth on the outside, cut it into the fashion of a long Katherine Pear, big and round at the one end and long and slender at the other, and according to the strength of your line, so make your work bigger or lesser, as for a line of three hairs, a cork of an inch and half in length, and as much in compasse in the thickest part, is big enough: and for a line of more hairs, a cork of more length and compasse will become it: and indeed to speak truly, forasmuch as it serveth but only for a direction to your eye, to know when the fish biteth, and when you shall strike; the lesser your Cork is, the better it is, and breedeth lesse afright in the water, inso much, that many Anglers will fish without any cork, with a bare quill only but that it is not so certain, nor giveth so sure direction as the cork doth. After you have shaped your cork, you shall with a hot iron bore a hole long-wise, through the midst thereof, and into that hole, thrust a quill, and through the quill draw your line, and fasten them both together with a wedge of the hard end of the goose feather: and note that both your quill and your wedge be white, for that breedeth least offence on the water; then place the smaller end of your cork down toward your hook, and the bigger end toward your rod that the smaller end sinking down with the hook, the bigger may float aloft and bear the quill upward, which when at any time you see or perceive pull'd down into the water, then you may safely strike for without doubt it is an assured sign that the fish hath bitten at the bait.

Their be other Anglers which make their corks in the fashion of a Nunne gig, small at both ends, and big in the midst, and it is not much to be disliked, only it is a little sooner apt to sink, and you may thereby strike before the fish have full bitten. Others shape their corks in the fashion of a whirle, or of a little apple, round, flattish of both sides, and this cork is best to Angle for the greatest Fishes, because it being not so apt to

link, will float till the hook be fastned, and that the Fish beginneth to shoot away with the bait, so that a man then striking can feldome or never loose his labour.

Of Angling
hooks.

Next to your Corks, is your hooks, and they be of divers shapes and fashions, some big, some little, some between both, according to the Fish at which you angle: the best substance whereof to make them, is, either old Spanish needles, or else strong wier drawn as near as may be to that height of temper, which being nealed and allaid in the fire, you may bend and bow at your pleasure. Now for the best softning of your wler, if you make your hook: of old needles, you shall need but too hold them in the blaze of a candle till they be red hot, and then let them cool of themselves, and they will be soft and pliant enough; but if you make your hooks of strong Spanish wier, you shall roule it round, and lay it upon burning charcoales, turning it up and down till it be all red hot in every place, then let it gently coole of it selfe, and it will be soft enough. Now for the making of your hooks, I advise you to go to such as are best reputed for making of them, and buy of all sorts from the biggest to the least, that is to say, from that which taketh the Loach, to that which taketh the Salmon; and let them lie before you for examples: then look of what sorts of hooks you intend to make, and with a fine File, first make the point of your hook, which would neither be too sharp, for then it will catch hold of every thing, when it should not, nor too blunt, lest it faile to take hold when there is occasion: therefore in that observe a mean, making it less then a fine needle, and more sharp then a small Pinne. When you have made the point, then with a thin knife of a very good edge, you shall cut out and raise up the beard, which you shall make greater or lesse, according to the bignesse of the hook, and the strength of the wier: for you must by no means cut the beard so deep, that thereby you weaken the hook, but it must be as strong in that place as any other. When the point and beard is made, you shall with a fine pair of round plyers, turn and compasse the hook about, making it round, circular-wise, being

being somewhat more then a semicircle, and ever observe that the rounder the compasse or bout cometh in, that so much the better proportioned the hook is. This done, you shall leave as much as you think convenient for the shank, and then cut it off from the rest of the wier: which done you shall beat the end down flat, and somewhat broader then the rest, and so polish and smooth it all over, then heating it red hot in a little pan of Charcoals, put it suddainly into the water, and quench it, which will bring your hook to a full strength and hardness. Thus you see how to make hooks of all sizes and shapes, whether they be single or double hooks, for although the quantities alter, yet the shapes do not; and the double hook, which is the Pike-hook, is no other, but two single hooks all of one wier turned contrary waies, and this double hook must not have the line fixt unto it, but a strong wier joined unto it, of three inches long, well wound, and wrapped with a smaller wier: then add to it another wier of the same length, as if they were two severall links joined together, and then the line fixed to the last link; and therefore are called armed hooks, for they defend the line from shearing or cutting in pieces with the teeth of the Pike.

Now for your single hooks, you shall thus fix them unto your lines, take a length of your twisted haire, containing that number which is fit for the hook, and having made a strong loop at the one end, lay the other end where there is no bout, upon the inside of your hook; then with a strong red silk, either single or double, according to the bignesse of the hook, being well waxed, whip and wrap the hook round about, as thick, close, and strait, as may be, in such sort as you see men whip their Bow strings, and in the same manner make the ends of your silk fast; then with a pair of sizers, cut the silk and haire off close by the hook, and you may be sure that they will not loose one from another, with reasonable violence.

After your hook is thus fastned to your line, you shall then plumb your line, which is to fix certain pieces of lead, according to the bignesse of your line about it, some being in length a quarter of an inch, some bigger, and some lesse, according unto

the weight of your hook, and bignesse of your cork, for these plummetts are but only to carry down your hock, and lay it in the bottom, neither being so heavy to make the cork sink, nor so light, as not with the smallest touch to make the cork dip into the water; you shall then understand, that your first plummet would be twelve or fourteen inches from the hock, the rest not above one inch distance one from another, not being above five or seven at most, albeit some Anglers use nine, and some more, as their fancies rule them. There is in plumbing of lines, three several fashions of plummetts used, as one long, another square, and the third in a Diamond form, but all tending to one end, have but one use, and the long ones are accounted the best, so that they be neatly set to, and the end very smooth and close laid down, so that they tangle not the line by catching hold upon weeds, or other trash in the bottome of the water.

Of other im-
pl-ments for
Angles.

Thus have you seen the best choice of Rods, Lines, Corks, and Hooks, and how to fix and couple them altogether to do their several Offices; it now resteth that we speak of other necessary implements, which should accompany the painful and industrious Angler, and they be these: He shall besides these before spoken of, have a large musket bullet, through which having fixed a double twisted thread, and thereof made a strong loop he may at his pleasure hang it upon his hook, and therewith sound the deep he fevery water, and so know how to plumb his lines, and place his cork in their due places; then he shall have a large ring of lead, six inches at least in compass, and made fast to a small long line, through which thrusting your Angle rod, and letting it fall into the water by your hair line, it will help to unloose your hook if it be fastned either upon weed, or other stones in the water.

Then he shall have a fine smooth board, of some curious wood for shew sake, being as big as a trencher, and cut battlement-wise at each end, on which he shall fold his several lines. His hock: he shall have in a dry close box, he shall have a little bag of red cloath, to carry his worms in, and mixe with them a little fresh mould and Fennell: then he shall either have a close kept horn, in which he shall keep Maggots. Bobbes, Pal-
mers

mers, and such like, or a hollow cane, in which he may put them, and Scarrabs : He shall have a close box for all sorts of live flies, and another for needles, silke, thread, Wax, and other loose hairs : then a roul of pitch thread to mend the Angle rod withall, if it chance to break, a file, a knife, a pouch with many purse, in which you may place all your implements whatsoever severally.

Lastly, he shall have a little fine wanded Peppe to hang by his side, in which he shall put the fish he catcheth ; and a small round net fastned unto a poles end, where with he may land a Pike, or any other great fish of that kind whatsoever. To have also a little boat or Cot, if you Angle in great waters, to carry you up and down, to the most convenientest places for your pastime, is also right necessary, and fit for an Angler ; and thus I have shewed you the substance of the Anglers instrument.

CHAP. II.

Of the Anglers Apparell, and inward Qualities

Touching the Anglers apparell (for it is a respect as necessary as any other whatsoever) it would by no means be garish, light coloured, or shining, for whatsoever with a glittering hew reflecteth upon the water, immediately it frighteth the fish, and maketh them flee from his presence ; no hunger being able to tempt them to bite, when their eye is offended ; and of all creatures there is none more sharply sighted then Fishes are.

Let then your apparell be plain and comely ; of a dark colour Anglers apparell Rustet, Tawny, or such like, close to your body, without any new fashioned flasher, or hanging sleeves, waving loose, like sails about you, for they are like blinks, which will ever chase your game from you : let it, for your own health and ease sake, be warm and well lined, that neither the coldness of the air, nor the moistness of the water may offend you : keep your head and feet dry, for from the offence of them springeth Agues, and worse infirmities.

Now for the inward qualities of the minde, albeit some Anglers ver-
Writers tues.

Writers reduce them to twelve heads, which indeed whoſoever enjoyeth, cannot chuſe but be very compleat in much perfection, yet I muſt draw them into many more branches. The firſt, and moſt eſpeciall whereof, is, that a ſkilfull augler ought to be a generall Scholler, and ſeen in all the Liberall Sciences, as a Grammarian, to know how either to Write or Diſcourſe of his art in true and fitting terms, either without affectation or rudeneſſe. Hee ſhould have ſweetneſſe of ſpeech, to perſwade and intice others to delight in an Exerciſe ſo much laudable. He ſhould have ſtrength of arguments to defend and maintain his profeſſion, againſt envy or ſlander. He ſhould have knowledge in the Sunne, Moon, and Starre; that by their aſpects, he may gueſſe the ſeaſonableneſſe, or unſeaſonableneſſe of the weather, the breeding of ſtorms, and from what coaſts the winds are ever delivered. Hee ſhould be a good knower of Countries, and well uſed to high-waies, that by taking the readieſt paths to every Lake, Brook, or River, his journies may be more certain, and leſſe wearifome. He ſhould have knowledge in proportions of all ſorts, whether Circular, Square, or Diametricall, that when he ſhall be queſtioned of his diurnall progresſes, he may give a Geographicall deſcription of the angles and channels of Rivers, how they fall from their heads, and what compaſſes they fetch in their ſeverall windings. He muſt alſo have the perfect art of numbring, that in the founding of Lakes or Rivers, he may know how many foot or inches each ſeverally containeth; and by adding, ſubſtracting, or multiplying the ſame, he may yeeld the reaſon of every Rivers ſwift or ſlow current. He ſhould not be unſkilfull in Muſick, that whenſoever either melancholly, heavineſſe of his thought, or the perturbations of his own fancies, ſtirreth up ſadneſſe in him, he may remove the ſame with ſome godly Hymne or Anthem, of which *David* giveth him ample examples.

He muſt be of a well ſetled and conſtant belief, to enjoy the benefit of his Expectation; for than to deſpair, it were better never to be put in practice. And he muſt ever think where the waters are pleaſant, and any thing likely, that there the Creator of all good things hath ſtored up much of his plenty,

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and though your satisfaction be not as ready as your wishes, yet you must hope still, that with perseverance you shall reap the fulness of your harvest with contentment. Then he must be full of love both to his Pleasure and to his Neighbour: To his pleasure, which otherwise will be irksome and tedious; and to his Neighbour, that he neither give offence in any particular, nor be guilty of any general destruction: then he must be exceeding patient, and neither vex nor exasperate himself with losses or mischances, as in losing the prey when 't is almost in the hand, or by breaking his Tools by ignorance or negligence, but with a pleased suffrance amend errors, and think mischances instructions to better carefulness.

He must then be full of humble thoughts, not disdainning when occasion commands to kneel, lye down, or wet his feet or fingers, as oft as there is any advantage given thereby, unto the gaining the end of his labour. Then must he be strong and valiant, neither to be amazed with stormes, nor affrighted with Thunders, but to hold them according to their natural causes, and the pleasure of the highest: neither must he, like the Fox which preyeth upon Lambs, imploy all his Labour against the smaller Prey: But like the Lyon that seazeth Elephants, think the greatest Fish which swimmeth, a reward little enough for the pains which he endureth. Then must he be liberal, and not working only for his own belly, as if it could never be satisfied; but he must with much cheerfulness bestow the fruits of his skill amongst his honest neighbours, who being partners of his gain, will doubly renown his triumph, and that is ever a pleasing reward to vertue.

Then must he be prudent, that apprehending the Reasons why the Fish will not bite, and all other casual impediments which hinder his sport, and knowing the Remedies for the same he may direct his Labours to be without troublesome. Then he must have a moderate contentation of the mind to be satisfied with indifferent things, and not out of any avaritious greediness think every thing too little, be it never so abundant. Then must he be of a thankfull nature, praising the Author of all goodness, and shewing a large gratefulness for the least satisfaction.

Then must he be of a perfect memory, quick and prompt to call into his mind all the needfull things which are any way in this exercise to be employed, lest by omission or by forgetfulness: of any, hee frustrate his hopes, and make his labour effectlesse. Lastly, he must be of a strong constitution of body, able to endure much fasting, and not of a gnawing stomach, observing hours, in which if it be unsatisfied, it troubleth both the mind and body, and loseth that delight which maketh the pastime only pleasing.

Cautions.

Thus having shewed the inward Vertues and qualities which should alwayes accompany a perfect Angler, it is very meet now to give unto you certain Cautions, which being carefully observed, you shall with more ease obtain the fulness of your desires. First therefore, when you go to Angle, you shall observe that all your Tooles, Lines, or Implements be (as the Seaman saith) yare, fit, and ready; for to have them ravel'd, ill made or in unreadinesse, they are great hindrances unto your pleasure. Then look that your baits be good, sweet, fine and agreeing with the season: for if they be otherwise improper in any of their natures, they are uselesse, and you had better been at home then by the River. Then you must not Angle in unseasonable times, for the Fish being not inclined to bite, it is a strange incentive that can compel them. Then you must be carefull neither by your apparel, motions, or too open standing to give afright to the Fish, for when they are scared they flye from you, and you seek society in an empty house. Then must you labour in clear and untroubled waters, for when the Brooks are any thing white, muddy and thick either through inundations or other trouble, it is impossible to get any thing with the Angle: Then, to respect the temper of the weather, for extream wind or extream cold taketh away all manner of appetite from fish: So doth likewise to violent heat, or rain that is great, heavy, and beating, or any storms, Snows, haile, or blustings, especially that which commeth from the East, which of all is the worst. Those which blow from the South are best, and those which come from the North or West are indifferent: Many other observations there are, but they shall follow in their due places.

CHAP. XII.

Of the best and worst Seasons to Angle in, and their Uses.

BEfore I direct you in the best Seasons, and their contrary, for the generall Art of Angling, I think it not amiss, a little by the way, to give you a glance or Speculation how to ordure your Eely and Art of each severall water : for the manner of your standing and concealing of your self is a material and chief point in this Art.

Know then, that if you Angle in any Pond or standing water, you shall before you fall to your businesse, with your Plumb, sound the Water in divers places, and where you find it deepest, blackest, and least transparent, there you shall stand to Angle, placing your self under the bank, and if it be possible, so as your shadow may be carried from the water : For you must at no time, if you can chuse, let your shadow lye upon the water : and although in these deep places your standing open or close, are either of them reckoned indifferent because the waters depth is a sufficient concealment, yet the closer you stand is accounted amongst Anglers most handsome and artificial.

The Anglers
manner of
standing.

But if you goe to Angle at the River, then the best place to cast in your Line, is, where it is deepest and clearest, so as you may behold the Sand or Gravell at the bottome : and in these places you shall strive to conceal your self as much as possible, as standing behind Poplars, Oziers, or other Trees, or under the covert of some Bank, Rock, or other ruines at the side of the River : also in covert places, where are many Weeds Roots of Trees, and other rubbish, is good Angling, but very troublesome : for fish lying there warm and in safety, will have a great resort thereunto, and bite freely, so that the Angler must be carefull in the putting in of his hook, and very deliberate in striking, least doing any thing rashly, he break his Line and hook, being never so little intangled.

It is good also to Angle in Whirle-pools, for they being like pits within the Rivers, are seldome unfurnished of the greatest Fishes ; also, it is good to Angle at the falls of water, as

under Bridges, standing behind the Jawmes and Arches, or at the flood gates of Mills, being hid with the higher Timbers. And generally where you see the water is deepest, clearest, and calmest, being least troubled with wind or weather, is the fittest place to angle in. Other observations there are, but they will follow in more necessary places.

The best season to Angle in.

To return then to our first purpose. You shall know the best season to Angle in, i. from April to the end of October, speaking of the general use of the pleasure; and the best hours also in general account, are from four in the morning till nine, and from three in the afternoon till after five in the Evening, the wind blowing from South, West, or North, and the ayr temperate, inclined to warmness; but to speak of particular observations of seasons, know that if the day be dark, close and lowering, or have a gentle whistling wind playing upon the water, it is good to Angle in, and the Fish will bite with pleasure: Nay, if a fine mizling dew of rain fall gently, without violence, they will then bite the faster: also after floods are gone away, and the Rivers are come within their own banks, the first cleanness recovered, and the water pure, then it is good to angle. And generally for your Summer angling, chuse the coolest time of the day, for in the heat of the day Fish betake themselves to their rest, and will neither bite nor play.

But for your Winter Angling, which is from October to April; you shall not make any difference of time, if the weather be calme, for all hours of the Sun are alike, onely the noon-tide or mid-day is most preferred, especially in Ponds and standing water. If the water where you Angle, ebbe or flow, the best time of Angling, is held to be in the ebbe: yet in some places, where the tide is not great, there the flood is preferred. Lastly, whenever you see the Trout play or leap above the water, and the Pike shut in pursuit of other fishes, it is then a very good time to Angle in using such baits as are then meet for the month and season, as shall be shewed hereafter.

Seasons ill to Angle in.

Now for those seasons which are naught to angle in, there is none worse than in the violent heat of the day, or when the Winds are loudest, Rain heaviest, Snow and Hail extreamest: Thunder and Lightning are offensive, or any sharp ayr which flyeth

flyeth from the East: the places where men use to wash Sheep you shall forbear, for the very smell of the Wool will chase fish from their haunts, Land floods are enemies to anglers, so also at the fall of the leaf is the shedding of leaves into the water, & many other such like pollutions, of which we will speak something more hereafter.

Therefore, to conclude this Chapter; and to shew you as well Of Fishes
Haunts. how to find your fish, as the Art to take it being found, you shall know that the Carp, Elg and Tench do ever haunt muddy places: the first, which is the Carp, lyeth ever in the depth and bottome thereof: the Tench, among the weeds and roots of Sedges, and the Eele under stones, blocks, or the Roots of Trees.

The Bream, the Chevin, and the Pike, haunt ever in the cleer and sandy bottome: the Pike where you see great store of small fry; the Chevin where the stream runneth swiftest, and the shade is greatest: and the Bream where the water is broadest, and the depth giveth greatest liberty; and generally these three sorts of fish delight more in standing waters then in running Rivers; although the ancient Proverb is,

*Ancome Eele, and Witham Pike,
In all England is none fike.*

which are Rivers in *Lincoln-shire*. Now the Salmon hath his haunt in the swiftest and broadest Rivers, whose Channels fall down into the Sea: The Trout loveth smaller brooks, whose current is swift, clear, gravelly, and ever hath his lodging in the deepest holes that are therein; and the Perch haunteth Rivers of the same nature, only he abideth most in creeks and hollownesses, which are about the bank; and indeed these three Fishes generally, Salmon, Trout and Perch, love clear streames, being green with weeds, and the bottomes hard with gravel and pebble.

The Gudgeon, the Loach, and the Bulhead, haunt ever shallowest places, and where streams are slow yet transparent; The Barbel, Roch, Dace, & Ruff haunt the deep shady places of those brooks which are mixt with more sand than gravel, or where the clay is firm and not slimy, and delight ever to lye under the sha-

shadows of Trees, brambles or other things growing from the banke.

The Luce or Lucern, which indeed is but the over-grown Pike, haunteth the broad and large Meeres, which are miles in compasse, being deep and still, and ever lodgeth in the bottome thereof amongst the Roots and Tufts of Sedge, and bulrushes, being quiet and least troubled. The Humber haunts the clajie Rivers of High Countries : where the soyle is Rich and full of Marle, or in Lakes or ponds of the same nature. The Shad and Tweat, haunt those waters which are brackish deep, and accustomed to ebb and flow : and where they haunt, there commonly also is found both the Mullet and Stunt: all which love to lodge close and flat at the bottome of the water, so it be more Ooze than gravel.

Objection.

But here now methinks, I heare the curious reprehend me, saying, that if these Rules should be infallible, that then no River or Pond could not contain above three sorts of Fish only, when dayly Experience sheweth us, that some Rivers have ten, some twenty, and some thirty, as the Trent for example, whose ancient name in French is *Trianta*, in Latine *Triginta*, and in English *Thirty*, derived from this ground because there standeth upon her, thirty Castles, thirty Market Towns, and are in her thirty severall sorts of fishes.

Answer.

To which I thus answer, that for as much as into most Rivers falleth many severall waters and many soiles, according unto the nature of those Countreies through which the Channels runne, that therefore every alteration of soyl may alter the breed of Fry, and many severall kinds may be in one Stream, so that the Angler in the choice of his pastime in such places, must either have a perfect knowledge how the soyles doe alter (which he may commonly know by the banke,) or else rely upon his experience, which will be the best Tutor to direct him unto the haunts of severall fishes; but for ponds or standing waters which are of one earth, there you shall surely find them best prosper, which are before rehearsed.

CHAP. XIII.

*Of Baits in general, and of every particular kind: their
Seasons, Use and preservations.*

Since I have thus far orderly pass'd over the outward and instrumental necessities appertaining to this modest Recreation, shewing the severall tooles and implements which are to be employ'd therein, and have also shew'd the inward and mental knowledge which should be harboured in his breast that will be an Angler: I will now proceed to speak of the Baits and incitements, which are the Agents and effecters of our desires in this pastime, without which all other implements are vain and useless: for what doth it availe to have all other things in perfection, when this, which is the strength and life of the rest, is either imperfect or defective?

To speak then generally of baits, they are divided into three kinds, which are, Life-baits, dead baits, and baits living but in appearance only. Your life-baits are worms of all kinds, especially the Red-worm, the Maggot, the Bobb, the Dor, Brown-flies, Frogs, Grasshoppers, Hornets, Wasps, Bees, Snails, small Roches, Bleaks, Gudgeons, or Loches. You dead baits are pastes of all makings, your brood of Wasps, dried or undried, the clotted blood of Sheep, Cheese, Bramble-berries, Corn, Seeds; Cherries, and such likg. And your baits which seem to live, yet are dead, are flies artificially made of all sorts and shapes, made of silke and feathers about your hooks; which will serve for every several season through the year, and being by your Line moved upon the water, seem to be live flies, which the Fish with great greediness will catch up and devour.

Now for the season in which these baits are most profitable, you shall understand that the Red worm will serve for small fish all the year long; the Maggot is good in July, the Bobb and Dor in May, the brown flies in June, Frogs in March, Grasshoppers in September, Hornets in July, Wasps and Bees in July, Snails in August, for the Rock, Bleak or Gudgeon, they serve the Pikes at any season; all Pastes are good in May, June, and July; dried Wasps in May: Sheeps blood and Cheese in April:

Of Flies.

April : for Bramble-berries, Corn and seeds, they are good at the fall of the Leaf. Last y^e for your dead flies, which are most proper for the Trout or Graveling, y^e u^{ll} shell know that the Dun Flye is good in March being the lesser, but the greater Dun Fly will serve the latter end of February : the Stone flye is good in April, the Red flye, and Yellow Fly in May ; the Black flye, the dark Yellow flye, and the Moorish flye in June ; the Tawny Fly part in May, and part of June, the Wasp flye, and the shell flye in July, and the cloudy dark flye in August.

The making of Flies.

Now for the making of these flies, the cloudy dark flye is made of black woole, clipt from between a Sheeps Eares, and whipt about with a black silk, his wings of the under maile of the Marlard, and his head made black and suitable, ~~fixed~~ ^{fixed} upon a fine piece of Cork, and folded so cunningly about the hock, that nothing may be perceived but the point and beard only. The shell flye is made of fine green Floxe, and the wings of the wings of a Pew-glead : the Wasp Flye is made of Black Wool, lapt about with yellow silke, and the wings of the down of a Buzzard; the Tawny flye is made of twany wool, and the wings set on contrary to another, and made of the white down of a Widgson : the moorish flye is made of fine blacke thorne from a freeze-gray Russet, and the wings of a Drake : the bright yellow flye is made of yellow wool, and his wings of a Red Cocks yellow main : the sad yellow flye is made of black wool, with a twisted yellow silk, like a list, whipt down on either side, and the wings of the wings of a Buzzard, set on with black thread : the black flye is made of black wool, and lapt about with the hede of a Peacocks tayl, his wings with the brown feathers of the Marlard, and some of his Blew feathers on his head : the Red flye is made of Red wool, lapt about with black silk, and the wings of the Mail of a Mallard, with some of the feathers of a Capon: the Stone flye is made of black wool made yellow under the wings, and under the tayl with silk, and the wings of Drakes down: the greatest Dun flye is made of black wool, and his wings of the Dun feathers of a Drakes tayle ; the lesser Dun flye is made of dun wool, and his wings of the mail of a Partridge.

Now for the shipes and proportions of these Flies, it is impossible to describe them without Painting, therefore you shall take

of these several flies alive, and laying them before you, try how near your art can come unto nature, by an equal shape and mixture of colours; and when you have made them, you may keep them in close boxes uncrushed, and they will serve you many years.

Now for the preservation and keeping of your quick baits Preservation
of Baits.
(for longer then they are neat and sweet they are not good) you

shall understand, that they must not be kept altogether, but every kind several by it selfe, and nourished with such comforts, as it delighteth in, when it is at liberty, or with such things as they breed in or upon, when they are first taken. And first for the Red worme: when you take them, you shall put them in a bag of red cloath, and chopping a handfull of Fennell, mixe it with halfe so much fresh mould being black and fertile, and they will both live and scour therein. There be some anglers which put wet mosse both under and above them: Others there be, which put Parsly or sweet Marjoram unto them, but the former way is the best, so you observe every night to renew their earth, or once in two dayes to refresh them with a little new Oxeding; and thus you may keep them two months without imperfection For the great white maggots, you shall mix with them sheeps tallow or little bits of a beasts liver; the best way to scour them, is to put them into a bag of blanketting, with sand; and hang them where they may have the air of the fire, or other warmth, for the space of an hour or two. For Frogs and Grasshoppers, you shall keep them in wet mosse, and long grasse, moistned every night in water; and when you angle with them, you shall cut off their legs by the knees, and the Grasshoppers wings neer unto the body: for other worms, as the Bob, Cadis worm, Canker, and such like, you shall keep them with the same things you find upon them; and for all live flies, you shall use them as you take them, only the Wasp, the Hornet, and Humble-Bee which is without sting, you shall first dry them a litle in a warm oven after the bread is drawn, and then dip all their head into sheeps blood, and then dry them again, and so keep them in a close box, and they will continue two or three months in all good perfection.

Now lastly, to speak of your made baits, which are pastes, Of making
the most of them will last the whole year, and as they be di- pastes.

vers, so I will shew you how to compound every one of them in his true and perfect nature. First, to make pastes that shall last longest; you shall take Bean flower, and those parts of the Conies leg, which is called the Almond of the Coney, or if it be of a fat young Whelp, or a Cat, it is as good: and to these put alike quantity of Virgin Waxe and sheeps suet, and then beat them together in a mortar, untill they be made one body: then with a little clarified honey, temper it before the fire, and so make it up in round bals. and it will last all the year: and the use thereof is, when you angle, to bait your hook therewith, and not any Fish which swimmeth in fresh waters, but will greedily bite thereat.

There is also another paste which is of equal quality and use with this, and will last as long, and that is, to take the Kidney-tallow of a sheep, and as much young Cheefe, and beat them in a mortar till they be one body, then add to them as much wheat-flower, as will bring it to an exceeding stiffe paste, then knead it before the fire, and allay the stiffe-ness with life-honey, and so make it up into bals.

The use of this paste is like the former. Take the blood of a Sheep, and of honey, like quantity, and beat them together with a lump of fresh cheefe, then with the fine grated crums of white bread, work them into a stiffe paste, and so role it up in bals; and when you angle, do not bait your hook therewith, but now and then cast little pellets thereof into the water, and it will intice the fish to resort unto you, and to bite with great greediness.

There be others which take bread crums, and beat them in a Mortar with ripe Cherries (the stones being taken out) untill it come to a stiffe paste, and then knead it up into bals, and use it as you do that which was last recited: It is most approved, and very excellent for all sorts of Fish in fresh waters.

Lastly, if you take the oyle of the Aspray, and Coculus Indiz, and Asia foetida beaten, and mixe with as much life-Honey, and then dissolve them in the oile of Polypody, and so keep it in a close glasse; then when you angle annoint your bait with this confection, and though the weather be never so unseasonable, or the fish never so ill disposed to bite, yet be sure you shall not lose

lose your labour, but take when all men else faile of their purpose: for the secret hath been rarely approved, and hitherto hath been concealed with great secrecy. And thus much for baits, and their uses.

CHAP. XIV.

*Of angling for every several kind of Fish: according to
their natures.*

NOW to shew you how you shal angle most properly for every Of the Good-
several Fish, with true art, according to the nature of gin, Roch and
the fish, I think it not amisse, first to begin with the Goodgin, ^{Dace.}
Roch, and Dace, which being Fishes of eager bite, most foolish,
least afraidful, and soonest deceived, are the first fittest preys for:
young Schollers, and such as are but learners in the art of Ang-
ging; for the easynesse of their gaining, will not only settle
an unresolved mind, but give unto ignorance, both comfort and
incouragement.

If then you will angle for any of these small Fishes in great
streams, it shall be meet to take a boat, and finding the places of
their haunt, which is commonly in sandy clear waters, and
where they run swiftest, their angle for them with your smal-
lest hooks, well headed, and smallest lines, well corkt. Your
hook would rather drag than be an inch from the bottome,
and your best bait is the Red-worme, Cod-worme, Maggot,
clotted blood of Sheep cut in little bits, or else the white spawn
or brood of Waips: and ever as soon as you see the cork stir,
suddenly strike: for they will lie nibbling at the bait, and finding
the hook forsake it. If you angle for them in small brooks,
you shall stand under bridges, at the falls of Mills, behind Pop-
lar, or Oziers, or any where, where the stream runneth deep and
swift. And ever note, that when your bite fails, you remove your
place, and seek out a new standing; and withall forget not ever
when you angle for any of these fish, to cast in some of your paste
before your hook, for this will make your sport much more abun-
dant: and although the Dace out of his own nature, biteth high,
and near the top of the water, yet these baits and inticements will
make him stoop, and be taken easily.

Of the Carps. If you will angle for the Carp, you must have a strong Rod and a strong Line, of at least seven or nine hairs, and either mixt with green or watched silk, your cork must be large, long and smooth: your leads smooth and close, and fixt near the hook, and the hook almost of a three penny compass. He is very dainty to bite, but at some special hours, as very early in the morning, or very late at night, and therefore he must be very much entised with paste: his best baits are the Moss-worm, the Red worm, or the Minnow, for he seldom refuse h them. The Cadis-worm is good for him in *Jun.*, and the maggot, black worme, or Grasshopper, in *July*, *August* and *September*. If you make him paste of four ale, white of egg, and bread crums, it will very much entise him. Also I would ever wish you before you fish for the Carp, to cast in a handful of white bread chippings into the Pond or River, for they will not only entice him to your bait, but also give you notice if you be near his haunt for you shall presently hear him smack above the water; and then if you misse him, either your fortune or skill is not good.

**Of the Chub,
Chevin, or
Trout.**

If you wil angle for the Chub, Chevin, or Trout, all your instruments must be strong and good: your rod dark and discoloured, your line strong, but small and short, your hook of a two-penny compass: and if you angle with a flie, then nor lead, nor cork, nor quill; if otherwise, then all of a handsome and suitable proportion.

The best standing to take them, is in close and concealed places, as behind trees, wals, or arches of bridges: their haunts, are in clear waters which run upon sand or gravel: and they are in best season, from *March* till *Michaelmas*. If you angle for them with dead flies without lead, or cork, I have shewed you in the former Chapter, the several flies for each severall month; but if you angle for them with other baits, then you must have both cork and lead, for he will bite near the bottome, yet sometimes you may angle for him with a small menow, hang'd at your hook by the neather parts, without cork or lead, and so draw the bait upon the top of the water; and both with it, and with every flie, strike rather before than after he biteth. If you angle for him at the ground, in *March*, *April*, *May*, and

Sept.

September, the menow is good baite, so is the Stone-fly, Cadis-worm, Bob, Red worm, ditch canker, young frogs, the worm that breedeth on the Ozier leaf; and the Duck-canker mixt together. In *June*, Crickets and Dore-flies are good: In *July* the Grasshopper is good, so is the Humblebee, dried Wasps, or dried Hornets, or any of their young brood in the combs: In *August*, flying Pismires are good, so is the Colewort-worm, or the Maggot. And in *September*, either Cherties, Mice before they have any hair, or the great Sow-worm.

If you will angle for the Eele, the best place is at Wares, Mil-ponds, bridges, hollow banks, or any swift falling water: your Line strong, and not above two els in length, and very heavily plumb'd, a good round hook, but no cork, because you must not strike till the Eele pluck: neither must you by any means pull hastily, but holding your Line stiffe, with labour and Patience tire him, lest that tearing his chaps, you lose him. The best baite is the Red worme, or little pieces of sheeps guts.

The Flounder and Sewant are greedy biters, yet very crafty: for they will nibble and suck at a bait a good while before they swallow it, and if they perceive the hook, they will flie from it. Therefore to make them more hasty of the bait, you must ever be moving your line, and seldome let it lie still. They lie most commonly in the deepest places of the River, where the water is stillest, and runneth with least force. Also they lie near unto the bank, and delight most in the stream which is backish, and mixt with the salt water. Your lines must be strong, and well plumb'd near to the hook: and the best bait, is the Red worm, and the young brood of Wasps.

The Barbel or Greyling, which some call the En bar, are very subtil and crafty fishes: Therefore you must be very careful that your baits be sweet and new, and when you angle for them, do in all things as you do for the Trout; for they bite aloft in the summer, and at the bottome in the Winter. Your Lines must be extraordinary strong, and your hooks of a three penny compass, for they are fishes of weighty bodies, and when they are struck, must have liberty to play and tire themselves, or else they will indanger the breaking of your Rod, and therefore

your line must be of the longest size.

The best season to angle for the Bream, is from the latter end of *February*, till *September*: he is a very lusty strong fish and therefore your tools must be good: the baits in which he most delighteth is, in worms of all sorts, Butter-flies, green flies, paste of bread crumbs, or the brood of Wasps.

Of the Tench The Tench is a fish that ever loveth the bottom of Rivers, where the Ooze or mud is thickest; and is most fit to be angled for, in height of Summer, for at other season he is not apt to bite, and all times he is very dainty.

The baits in which he delighteth most, is pastes that are very sweet; and the browner the better, especially if it be made with the blood of a Sheep. At the great red worm also, he will bite: and so much the sooner, if you mixe them with this paste; the Maggot and dried Wasp, he will seldom refuse, chiefly being dight in honey.

Of the Bleak, Ruffe, and Perch. The Bleak, Ruff, and Perch, are fishes which bite neither high nor low, but for the most part in the midst of the water, therefore your line must be very lightly plumb'd, and far from the hook. The baits which most intice them, besides the red worm, is the house-fly in the summer, and fat of bread in the winter: in *April* they will bite well at the B-b-worm, or Maggot, and in all other seasons, they seldom refuse any worm or canker. Your line would be small, and well armed from the hook a handfull with small wiew, for the teeth of the Perch will cleave and gnaw it asunder.

Of the Pike. The Pike is a fish of great strength and weight, insomuch, that you can hardly have a line of hair to hold him; therefore your best Anglers use most commonly a Chau'k line: your angle-rod also must have no small top, but be all of one piece and bigness, and the line made exceeding fast from slipping. Your hook would be of the strongest wiew, white or yellow, and made double, the points turning two contrary wayes, and then armed with strong wiew a foot at least: his best bait is a little small Roch, Dace or Minnow, the hook being put in at the tail, and coming forth under the gills, and you must seldom or never let your bait lie still in water, but draw it up and down, as though the fish did move in the water, and fled from the Pike, for

for this will make him more eager and hasty to bite : and having bit, you must be sure to tyre him well before you take him up.

The yellow live Frog is also an excellent bait for the Pike, for you must understand, that they naturally delight not in any dead or unmoving food.

There be some which take a great deal of delight and pleasure to Snickle or halter the Pike, which is good when Pikes are broke out of Ponds or Rivers, and come into small Ditches or Randles, as is oft to be seen in low-Countries. The way then to halter them is, first to find the Pike where he lieth (which in the heat of the day, you may easily doe) then take your Chaulk-line, and making a large running nooze thereof, put it gently into the water, about two feet before the nose of the Pike, then when you feel it to ich the ground, cause one to go behind the Pike, and with a pole to stir him, then as he shooteth, meeteth him with your nooze, and so with a sudden and quick jerk throw him upon the land. In this sport you must be very ready, nimble, and quick sighted; for if you give him the least time, he will escape you.

Of Snickling
the Pike.

Now lastly, touching the angling for the Salmon, albeit he is a fish which in truth is unfit for your travell, both because he is too huge and cumbersome, as also in that he naturally delighteth to lie in the bottomes of great deep Rivers, and as near as may be in the midst of the channel, yet forasmuch as many men esteem that best which is got with most difficulty, you shall understand that the bait which he most delighteth, are those which serve for the Trout, as paste or flies in the Summer; and Red-worms, Boh-worms, or Cankers on the water-docks after *Michae'ms*. And thus much for the art of angling, and taking of each severall sort of fish which live in the fresh or brackish waters.

Of the Salmon.

CHAP. XV.

*Of taking Fish without Angles: and first of laying
Hooks.*

THe laying of hooks to take fish in the night, is most commonly used for the Pike, in great broad Waters or Meers full of sedges, bulrushes, and other weeds, being very deep and muddy: Some do use to lay them for the Eel also, but you shall understand, that if you lay for the Pike, you must by no means let your hook go to the bottom, but with a float keep it half a foot from the ground, but if you lay for Eels, then let your hooks be smaller, and sink as low as they will.

Now for the manner of laying them, you shall bait the hooks as you did when you angled, with Menow, Roch, Dace, Gudgeon, or Millers thumb: and being made fast to strong pack-thread, fasten also that pack-thread to a strong cord, which cord if it be three fathom in length, may hold sixteen or twenty hooks. Then fixing two strong stakes into the earth, fasten the two ends of the big cord to the two stakes, and so let it lie from Sun-set, untill Sun-rise, and you shall never faile, but some of your hooks will have taken. Only observe if you lay for Pikes, to lay in the midst of the water, neer unto the sedge and weeds: but if you lay for eels, lay very neer the banks, so there be no hollow or rotten trees growing thereon.

Now if you would with these laid hooks take any other sort of Fish, you shall lay such hooks as are fit for them: and before you depart away, cast into the water good store of pellets of those pastes which are proper for the fishes you would take: as the paste which is made of bran, sheeps blood, garlick, and lees of wine, will take all sorts of small fish: that paste which is made of sheeps liver, guts, hogs blood, bread crums, and Opoponaxe, will bring Perch, Tench, Carp, or Bream, unto your hooks, and that paste which is only made of Rue, Pine-apple kernels, bean meal and hony, will bring the Salmon, the Trout, Chevin, or Barbels unto your hooks, at all times of the year.

CHAP. XVI.

*Of preserving Fish from all sorts of
Devourers.*

AMongst all the Ravenous Creatures which destroy Fish, there is none more greedy than the Otter, whose only food being thereon, hourly lyeth in wait to consume them : Therefore though some Fisher-men use to take them with a Wheel made with a double tunnel, and called by the name of the Otter-wheel, whose practice is so ordinary, that every Fisher-man knows the use of the same ; Yet for a more easie and ready way to destroy him, you shall as near as you can find out his haunt, and the holes that are in the bank, and under the Roots of Trees where he lodgeth, and then take a great Eele, and flitting her back above her navel, put in three or four lumps of *Arsnick*, and then stitch up the skin again, and so lay the Eele from the navel downward in the water, and from the navel upward out of the water : which when the Otter finds, it is his property to eat unto the navell, and no further, which if he do, it is certain that it is the last he will eat.

Next to the Otter, the Hern is a great devourer of Fish, especially the small frye, or that which lives in shallow places : Therefore to destroy the Hern, you shall take a strong Barbell hook, and baite it, either with a M now, or a peece of Doggs flesh, colour your Line green and lay it in a shallow place made fast to some stake, where the Hern may wade to the knee to take it, and as soon as he hath swallowed, he shall no more go from the place.

Now, for as much as the Foul is a great destruction unto the young Spawn or Fry of Fish, it shall be good for the preservation thereof, to stake down into the bottoome of your Ponds good long Kids or Faggots of brush-wood, mixt with the boughs of green Willows, or Oziers, in which the Fish casting their Spawn it will be a defence for them, till they be able to flye into better safety.

Nxt to the Hern the Water-Rat is a great destroyer of young
L fish

fish, especially Trouts, Crevisses, or any that lye in holes in the banks : the best way to destroy them is by hunting them with water Dogges which is a very good sport, and I have seen twenty kild in an afternoon : but some do use to take them with hurches, or dead-falls, set in their haunts : but the former way is the better.

Next them, the Sea-pye, and Sea mew, is a greet devourer or consumer of Fish, and there is no better way to take him than by setting Rods drest with water Limes, and set shoring on the edge of the water. one guesse or row over another, in such places as the Water is most shallowest ; and upon some tufts of green Weeds, lay a fish for a bait under the Rods, at which he can no sooner strike but he is presently taken.

Next these the Kings Fisher (which is a small green bird) is a great destroyer of Fish, and the way to take him is to mark his haunt where he commonly sitteth, which is ever in some bush next the River : then set a little Cradle of limed straws about his seat, and they will quickly take him, for he seldome changeth, but ever sitteth upon one bough.

Now to conclude, for the Cormorant, the More-hen, the bald coot, or the Ospray, which destroy all kind of Fish whatsoever, there is no way better to kill them, then by watching their haunts, to shoot at them with a Fowling piece, and in the breeding time of the year to destroy their nests.

CHAP. XVII.

Of the Ordering of Ponds, for the nourishment of Fish.

THERE is nothing that killeth Fish, or maketh them to prosper worse, than putrified and stinking waters : neither is there any thing which corrupteth water sooner than weeds, Sedge, and such filthinesse, being suffered to grow therein ; Therefore it shall be good once in three years for to cleanse your Ponds of all manner of Weeds and Filth, which with a small Boat and sharp hook you may easily do at the fall of the leaf, for to cut them in the Spring doth increase them. Now if your Ponds be much subject to mud, as for the most part those in clay

Countrys are, then it shall be good once in seaven years to drain them, and lade them, and this would be done at the beginning of the Spring ; and such Fish as you are willing and mean to preserve, you shall put into smaller pits or stews, and the other dispose at your pleasure : then causing the mud to be troden with mens feet as you tread mortar, you shall see all the Eeles rise aloft, which when you have taken also, then with shovels and trough Spades cast out all the mud and filth (which is a singular compost for Land) upon the bank : then sodde the bottome of the Pond, and the sides with green foddys and fix them hard into the Earth with small stakes of Sallow, and these sides will nourish the Fish exceedingly.

This done, if your Pond have not any fresh Spring in it, then you shall laid the water back again into it, and then draining your stews, take out your store of Fish, and put them again into your Pond observing ever that there be two parts, spawners ; and but a third melters.

These pits and small stews, howsoever others write to the contrary, are better for feeding of Fish, then breeding : therefore you shall ever keep them with fresh water, and placing so one by another, that you may empty them at pleasure, once in three months renew their banks and bottomes with fresh foddys of the fruitfullest grafs ; also, you shall put into them good store of small Fry of Roch Dace, Menow, Loch, and Miller thumbs : for the bigger Fish will feed thereon : also the inward Garbage and blood of Sheep, Calves, Hoggs, and such like, which will fat fish suddainly ; for you must know that as the Fish in Rivers have by vertue of the current, ever something brought to them to feed on, so the Fish which is imprisoned in Ponds and wants that help, must either be relieved or else perish, and there is nothing better to feed them with, then that before spoken of or else Brewers grains, chippings, curds, and any corne whatsoever, thrown into the Ponds, Morning and Evening.

CHAP. XVIII

Of the best Water-Lime.

THe best water Lime that can be made, and which will most surely hold within the water, is to take a pound of the strongest Bird lime, and wash it in nine running waters, untill there be no hardnesse in it, and then beat out the water clean, and dry it. Which done, put it into an earthen pot, and adde thereto as much Capons Grease as will make it runne, two spoonfulls of strong vinegar, a very little Lamp Oyle, and Venice Turpentine, and boyl them all gently together upon a soft fire, stirring it continually. Then take it from the fire, and let it cool, then at any time when you mean to use it, warm it, and then annoynt either your Rods, Bushes, Straws, or Lines, and no water will take away the strength.



Of the Fighting Cock.

CHAP. XIX:

Of the Choyce, Ordering, Breeding, and Dyeting of the Fighting-Cock for Battell.

SINCE there is no pleasure more Noble, Delightsome, or void of couzenage and deceit then this pleasure of Cocking is ; and since many of the best wisdomes of our Nation have been pleased to participate with the delights therein, I think it not amiss, as well for the instruction of those which are unexperienced, as fortifying of them which have some knowledge therein, to declare in a few Lines the Election, Breeding, and Secrets of dyeting the Fighting Cock, which having been hitherto concealed and unwritten of, is (for our pleasure sake) as worthy of a general knowledge as any delight whatsoever.

To speak then first of the choyce of the Fighting Cock, you shall understand that the best Characters you can observe in him is the shape, Colour, Courage, and sharp heel ; for his shape, the middle and different size is ever accounted best because they be ever most matchable, strong, nimble, and ready for your pleasure

The choyce of
the Cock for
the battell.

sure in his battle : and so the exceeding little Cock is as hard to match, and is commonly weak and tedious in his manner of Fighting. He would be of a proud and upright shape, with a small head, like unto a Sparhawk, a quick large eye, and a strong back, crookt and bigger at the setting on, and in colour suitable to the plume of his feathers, as black, yellow, or reddish. The beam of his legge would be very strong, and according to his Plume, Blew, Gray, or yellow : his spurs long, rough, and sharpe, a little bending and looking inward.

For his Colour, the gray pyle, the yellow pyle, or the red with the black breast is esteemed the best : the pide is not so good, and the white and dun are the worst. If he be Red about the head, like skarlet, it is a sign of lust, strength and courage, but if he be pale it is a sign of sickness and faintness.

For his courage, you shall observe it in his walke, by his treading, and the pride of his going, and in his pen, by his oft crowing. For the sharpnesse of his heele, or as Cock-masters call it, the narrow heele, it is onely seene in his fighting, for that Cock is said to be sharp heeld or narrow heeld, which every time he riseth hitteth, and draweth bloud of his adversary, gilding (as they term it) his spurs in bloud, and threatening at every blow an end of that Battaille.

And these Cocks are surely of great estimation, for the best Cock-Masters are of opinion, that a sharp heeld Cock, though he be a little false, is much better then the truest Cock which hath a dull heel, and hitteth seldome, for though the one fight long yet he seldome wounds, and the other though he will not indure the uttermost hewing, yet he makes a very suddain and quick dispatch of his businesse, for every blow puts his adversary in danger.

But that Cock which is both assuredly hard, and also very sharp heeld, he is to be esteemed, and is of the most account above all other, and therefore in your general Election chuse him which is of a strong shape, good colour, true valour, and of a most sharp and ready heel.

Now for the breeding of these Cocks for the battle, it is much differ-

differing from those of the dunghill, for they are like Birds of ^{The breeding} prey, in which the female is ever to be preferred and esteemed ^{of the battaile} before the Male, and so in the breed of these Birds, you must be ^{Cock.} sure that your Hen be right, that is to say, she must be of a right plume, as grey griffel, speckt or yellowish, black or brown is not amiss : she must be kindly unto her young, and of large body, well peaked behind for large Egges, and well tufted on the crown, which shews courage : if she have Weapons she is better, but for her valour it must be excellent, for if there be any sort of cowardise in her, the chickens cannot be true.

And it is a note amongst the best breeders, that the perfect Hen from a Dunghill Cock, will bring a good Chicken, but the best Cock from a Dunghill hen can never get a good bird ; and I have known in mine own experience, that the two famousst Cocks that ever fought in these dayes, the one called Noble, the other Griffel, begot on many ill Hens very bad Cocks ; but the most famous Hen Jinks never brought forth ill Bird, how bad soever her Cock were.

Having then unto perfect Cocks got perfect Hennes, (for that is the best breeding) you shall know that the best season of the year to breed in, is from the increase of the Moon in *February*, to the increase of the Moon in *March* : for one *March* bird is ever better worth than three at any other season. You shall place her pen in which she sitteth, to stand warm, and to make her bed of soft and sweet straw, for they be much tenderer then the Dunghills are ; neither shall you suffer any other Fowl to come in her view where she sits, for it will move her to displeasure, and make her to indanger her Eggs.

You shall also observe in her sitting, whether she be busie to turn her Eggs, (which is a good sign in a Henne) and if she be slack, you shall help her at such times as she riseth from her nest, and ever be sure that when she cometh from her nest, to have meat and water ready for her ; lest being forced to seek her food, she suffer her Eggs to cool too much : also, you shall have Sand, Gravell, and fine sifted ashes in the Room where she sitteth, in which she may bath and trim her self, at her pleasure.

After one and twenty dayes is the time of their hatching,
and

and if when they are new hatched, the do neglect to cover and keep the first warm till the rest be disclosed, you shall observe her and take those that are first opened, and lapping them in warm Wool, lay them within the ayr of the fire till the rest be hatcht, & then put them all under her, and keeping both the hen & them exceeding warm, for they be so tender that the least cold will kill them, and suffer neither them nor the hen to go abroad into the ayr till they be a month old; and let them have store of food, as Oat-meal, Cheese-parings, Chilter-wheat, and such like, and a large Room to walk in, the floor being boord; for the earth floor is too moyst, and the playster-floor too cold.

After they are a month old, you shall let them walk in some grasse Court or green place, where they may have store of Worms, but by all means be sure there be no stinking puddles of water in it; no sinks, nor filthy Channels, for it is the greatest poyson that can be to birds of this nature, and breedeth those Diseases which are most mortall: if every morning before they go forth, you perfume them and their Room with Rosemary, or Pennyroyall burnt, it is a great preservation against all those infirmities; or to chop Leek blades amongst their meat is very good also.

In this sort you shall nourish them till you may distinguish the Cock-chicken from the Hen, and then seeing their Comb or Wattels but appear, you shall cut them away, and so annoynt the sore with sweet butter till it be whole. This will make them have fine small, slender, and smooth heads, whereas to suffer the Comb to grow to his bignesse, and then cut it away, it will make him a gouty thick head, with great lumps: neither is the Flux of blood wholesome, for the least losse of blood in a feathered soul, is exceeding mortall, and very dangerous.

You shall suffer your Cock Chicken to go together with their Hens till they begin to fight, and peck one at another, but then you shall separate them, and disperse them into several walks; and that walk is the best for a Fighting Cock which is farthest from resort, as at Wind-mills or Water-mills, Grange-houses and such like, where he may live with his Hens with-

out the offence or company of other cocks. Lodges in Parks are also good, and so are Cony-warrens, only they are a little too much haunted with vermin; and that is dangerous. Let the feeding place for your cocks be upon soft dry ground, or upon boards: for to feed upon paved earth, or on Plaster floors, will make their beaks weak, blunt, and not apt to hold fast. Any white corn is good food for a cock in his walk, and so are toasts or crusts of bread steeped in drink, or mans urine, for it will both scour and coole them inwardly.

If your chickens begin to crow (not being six months old) clear and lowd, or at unseasonable times, doe not esteem them, for it is an apparant signe of cowardise and falshood: for the true cock is very long before he get his voyce, and when he hath it, he observes his hours with the best judgement. Unto your fighting cock three hens are sufficient; five are with the most, for they are so hot of nature, and will tread so much, that they soon consume their natural strength.

A cock would not be put to the battel before he be two years old, at which time he is perfect and compleat in every member; for to suffer him to fight when his spurs are but warts, you may well know his courage, but never his goodnesse.

You must also have an especiall care to the Perch whereon your cock sitteth when he rousteth, for if it be too small in the gripe, or crooked, or so ill placed that he cannot sit, but he must straddle with his legs, any of these faults will make him uneven heeld; and whatsoever he was naturally, yet by this accident he will never be good striker, for the making of the Perch either maketh or marreth the cock. Therefore to prevent this fault, the best way is to have in your roust a row of little Perches, not above seven or eight inches in length, and not a foot from the ground, so that your cock may with ease go up to them, and being set, must of force have his legs stand neer together. It is a rule, that he which is a close sitter, is ever a narrow striker.

Let the footstool of the Perch be round & smooth, and about the bignesse of a mans arm. Yet for your better knowledge, because words cannot so well expresse these quantities, it shall not be a-

misſe for you to goe to ſome famous Cockmaſters houſe, and view the Perches which are within his feeding Pennes, and according to thoſe proportions frame your owne; for the Perch is the making and ſpoyling of any cock whatſoever.

Again, you muſt be careful, that when your cock doth leap from his Perch, that the ground be ſoft whereon he lighteth, for if it be hard or rough, it will make your cock grow gowty, and put forth knots upon his feet.

The dyeting
of cocks for
the battel.

Of taking up
Cocks.

Of the Cock-
Penne.

Of this diet.

Now laſtly, for the dyeting and ordering of a cock for a battel, which is a ſecret never yet divulged, but kept cloſe in the breaſts of ſome few; and forasmuch as in it only conſiſteth all the ground and ſubſtance of the pleaſure, the beſt cock undicted; not being able to encounter with the worſt cock that is dictated, you ſhall underſtand, that the time to make up your cocks, is at the latter end of *Auguſt* (for from that time till the latter end of *May*, Cocking is in requeſt) and having viewed them well, and ſeen that they are ſound, hard feathered, and full ſummed, you ſhall put them into ſeverall pens, the models whereof you may behold in every cockmaſters, or Inne-keepers houſe, having a moving Perch in it, to ſet at which corner of the Pen you pleaſe.

This Pen ſhould be made of very cloſe boards, well joined together all but the fore-front, which would be made open like a grate, one bar two inches diſtant from another, and before the grate, two large troughs of ſoft wood, one for his meat, the other for his waters. The door of the grate ſhould be made to liſt up and down, of ſuch largeneſſe, that you may with eaſe put your cock in and out, and dayly cleuſe the Penne to keep it ſweet and whoſome.

This Pen would be at leaſt three foot in height, and two foot in ſquare every way, and many of them may be joyned in one front, according to the bigneſſe of the room, in which they are built; and alſo one above another, only with over-shadowing beards, ſo that one cock may not ſee another.

When your cock, as aforeſaid, is put up into his Penne, you ſhall for three or four dayes, feed him only with old manchet, the cruſt pared away, and cut into little ſquare bits, and you ſhall

shall give him to the quantity of a good handful at a time, and you shall feed him three times in a day, that is to say, at Sun rise, at high noon, and at Sun set. You shall ever let him have before him the finest, coldest, and sweetest Spring-water that you can get.

After he hath been thus fed four dayes, and his Corn, Wormes, Gravel, and other courie feeding gone from him, In the Morning take him out of the the Pen, and another cock also, and putting a pair of Hots upon each of their heels, which hots are soft bumbasted roubles of leather, covering their spures, so that they cannot hurt or bruise one another, and so setting them down on the green grasse, let them fight and buffet one another a good space, as long as in their teaching they do not wound or draw blood one upon another; and this is called the sparring of cocks: it heateth and chaſeth their bodies, and it breaketh the fat and glut, which is within them, and maketh it apt to cleanse and come away.

Of Sparring
of Cocks.

After your cocks have sparred sufficiently, and that you see them pant, and grow weary you shall take them up, and taking off their Hots, you must have deep straw baskets made for the purpose, with sweet soft straw to the middle, and then put in your cock, cover him with sweet straw up to the top, and then lay on the lid close, and there let your cock stowe and sweat till the evening.

But yet before you put him into the stove, you shall take butter and rosemary finely chopt, and white Sugar candy, all mixt together, and give him a lump thereof, as much as your thumb, and then let him sweat; for the nature of this scouring is to bring away his grease, and to breed breath and strength. You may in time of necessity, for want of these straw baskets stow your cock in a cock-bag, by laying straw both under and above him, but it is not so good, because the air hath more power to passe thorow it.

After four of the clock in the evening, you may take your cock out of the stove, and licking his head and eyes all over with your tongue, put him into his Pen, and then taking a good handfull of bread, small cut, put it into his trough, and then pissing into the trough, also give it him to eat, so as he may

take his bread out of the warm urine, for this will make his scouring work, and cleanse both his head and body wonderfully.

Now you shall understand, that the bread which you shall give him at this time, and at all other times during his dieting, shall not be manchet, but a speciall bread made for the purpose, in this manner: you shall take of wheat-meal half a peck, and of fine oat-meal flower as much, and mixing them together, knead them into a stiffe paste, with Ale, the white of a dozen eggs, and halfe a pound of butter, and having wrought the dowe exceeding well, make it into broad thinne cakes, and being three or four dayes old, and the blisterings of the outside cut away, cut it into little square bits, and give it the cock.

There be some others that in this bread will mixe Licoras, Anniseeds, and other hot Spices, and will also in the cock-water, steep slices of Licoras; but it is not commendable, for it is both unnaturall and unwholesome, and maketh a cock so hot at the heart, that when he comes to the latter end of a battle, he is suffocated and overcome with his own heat: therefore I advise men of judgement, to take that for the best diet, which is most naturall, and least contrary unto the fowls ordinary feeding.

But to return to my former discourse, after you have fed your cock thus for all night, you shall the next day let him rest, and only give him his ordinary feedings of bread and water, then the next day (which is the second day after his sparring) you shall take him into a fair even green Close, and there setting him down, having some Dunghill-cock in your arms, you shall shew it him, and so run from him, and entice him to follow you, and so chase him up and down half an hour at least. suffering him now and then to a stroke at the Dunghill-cock. And when you see that he is well heated and panteth, you shall take him up and bear him into your cock-house, and there first give him this scouring: Take of butter, which hath no salt, halfe a pound, and beat it in a mortar with the leaves of Herb of grease, hyssop, and Rosemary till the herbs cannot be perceived, and that the butter is brought to a green
Salve

Salve, and of this give the cock a soule or two, as big as your thumb, and then stowe him in a basket, as is before said, till evening, and then feed as was formerly declared.

The next day you shall let him rest and feed, and the next day after, you shall sparre him again: and thus every other day for the first fortnight, you shall either sparre or chase your cock, which are the most naturallest and kindest heats that you can give him, and after every heat, you shall give him a scouring: for this will break and cleanse from him all grease, glut and filchiness, which lying in his body, makes him parit, faint, and not able to stand out the latter end of a battel.

Having fed your cock thus the first fortnight, the second fortnight you shall also feed him in the same manner, and with the same food; but you shall not sparre him, or give him heats above twice in a week at the most insomuch, that thrice or four times in the fortnight will be sufficient, and each time you shall stowe and scour him according to the nature of his heats, that is to say, if you heat him much, you shall stowe him long, and give of your scouring the greater quantity, if you finde that he is in good breath, and needeth but slight heats, then you shall stowe him the lesse while, and give him the lesse of the scouring.

Now to the third fortnight, which maketh up the six weeks compleat (being a time sufficient to prepare a cock for the battel) you shall feed him as aforesaid, but you shall not spar him at all, for fear of making his head tender or sore, neither give him any violent exercise, but only twice or thrice in the fortnight, moderately let him run and chase up and down, to maintain his wind, and now and then cuffe a cock, which you shall hold to him in your hands, which done you shall give him his scouring well rounded in the powder of Sugar-candy, white or brown, but brown is the better, for the cock then being come to perfect breath, and having no filth in his body for the scouring to work on, it will work and cause operation upon the vitall parts, and make the cock sick, which the Sugar-candy will prevent, and strengthen nature against the medicine.

After the end of six weeks feeding, finding your cock in lust and breath, you may fight him at your pleasure, observing that he have at least three dayes rest before he fight, and well emptied of his meat before you bring him into the Pit.

The matching
of Cocks.

Now when you bring him into the Pit to fight, you must have an especiall care to the matching of him, for in that are consisteth the greatest glory of the Cock-master, for what avail-eth it to feed never so well, if in the matching you give that advantage which overthroweth your former labour? Therefore in your matching, there are two things to be considered: that is, the length of cocks and the strength of cocks; for if your adversary cock be too long, yours shall hardly catch his head, and then he can never endanger eye or life: and if he be the stronger, he will overbear your cock, and not suffer him to rise, and strike with any advantage: therefor for the knowledge of these two rules, though experience be the best Tutor, yet the first, which is length, you shall judge by your eye, when you gripe the cock about the waist, and make him shoot out his legs, in which posture you shall see the uttmost of his height, and so compare them in your judgment. Now for his strength, which is known by the thicknesse of his body, (for that cock is ever held the strongest, which is the largest in the girth) you shall know it by the measure of your hands, griping the cock about from the points of your great finger, to the joints of your thumbs, and either of these advantages by no means give to your adversary, but if you doubt losse in the one, yet be sure to gain in the other: for the weak long cock will rise at more ease, and the short strong cock will give the surer blow, so that because all cocks are not cast into a mould, there may be a reconciliation of the advantages; yet by all means give as little as you can.

Of preparing
Cocks to the
fight.

When your cock is equally match, you shall thus prepare him to the fight, first, with a pair of fine cock shears you shall cut all his main off, close unto his neck, even from his head, unto the setting on of his shoulders: then you shall clip off all the feathers from his taile, close unto his Rump, where the more skarlet that you see in his Rump, in the better estate of body the cock is. Then you shall take his wings, and
breeding

spreading them forth by the length of the first feather of his rising wing, clip the rest slope wise with sharp points, that in his rising, he may therewith indanger the eye of his adversary: then with a sharp knife you shall scrape smooth, and sharpen his spurs.

Lustly, you shall see that there be no feathers about the crown of his head, for his foe to take hold on, and then with your spit-^{The ordering}le, moistning his head all over, turn him into the Pit to move his ^{of cocks after}barren. When the battle is ended, the first thing you doe, you ^{battel, and the}curing them. shall search wounds, and as many as you can find, you shall with your mouth, suck the blood out of them then wash them very well with warm urine, to keep them from ranckling, and then presently give him a roul or two of your best scouring, and so stowe him up as hot as you can both with sweet straw and blanketing, in a close basket for all that night; then in the morning take him forth, and if his head be much sweld, you shall suck his wounds again, and bath them with warm urine, then having in a fine bag the powder of the herb Robert, well dried, and finely seift, pounce all the sore places therewith, and then give the cock a good handful of bread to eat, out of warm urine, and so put him into the stove again, in the same manner as before mentioned, and by no means let him feel the air until all the swelling be gone, but twice a day suck his wounds, dresse him, and feed him, as is aforesaid.

But if he have received any hurt, or blemish in his eye, then you shall take a leafe or two of right ground ivy, not that which runneth along the ground, and is of the ignorant so called. but that which growes in little tufts in the bottome of hedges, and is a litle rough leafe, and having chewed it very well in your mouth, and suckt out the juyce, spit it in the eye of the cock; and it will not only cure it of any wound, or any blow in the eye, where the sight is not pierced, but also defend it from the breeding of films, hawes, warts, or any such other infirmities which quite destroy the sight: Observing that you do not cease to dresse the eye therewith so long as you shall perceive any blemish therein.

Now if your cock have in his sight veyned himself, either by narrow striking, or other crosse blow, you shall find out the wound

wound, and presently bind thereunto the fine toft down of a hare, and it will both staunch it and cure it.

For any other casual infirmity or sickneffe which shall happen unto cocks, look in the former book called *Cheape and Good*, and you shall find them set down at large; only I will give you this one small remembrance, that after you have put forth your wounded cocks to their walks, and come to visit them a month or two after, if you find about their head any swollen bunches, hard, and blackish at one end, you shall know that in such bunches are unsound cores; therefore presently with your knife, you shall open the same, and crush out the cores with your thumbs, then with your mouth suck out all the corruption, and then fill the holes full of fresh butter, and it will cure them. And thus much for the nature of the cock, and how to keep him for his best use,

FINIS.



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FINIS.

THE
ENGLISH
HOUſ-WIFE,

CONTAINING

The inward and outward Vertues
which ought to be in a compleat Woman :

As her skill in Phyſick, Surgery, Cookery, Extrac-
tion of Oyles , Banquetting ſtuffe, Ordering of great
Feaſts, Preſerving of all ſorts of Wines, conceited Secrets,
Diſtillations, Pertumes, ordering of Wool, Hemp, Flax : making
Cloth and Dying: the knowledge of Dayries : Office of Malting;
of Oats, their excellent uſes in a Family: of Brewing, Baking,
and all other things belonging to an Houſhold,

A Work generally approved , and now the ſeventh time
much augmented, purged, and made moſt profitable and neceſſary
for all men, and the generall good of this
NATION.

By G. M.

LONDON,

Printed by *W. Wilſon*, for *E. Brewſter*, and *George*
ſawbridge, at the Bible on Ludgate-hill,
near Fleet-bridge. 1660.



TO THE RIGHT

HONOURABLE

And most Excellent Lady,

FRANCIS, Countesse Dowager
of EXETER.

Howsoever, (Right Honourable and most
vertuous Lady) this Book may come to
your Noble goodnesse cloathed in an old
name or garment, yet doubtlesse, (Excel-
lent Madam) it is full of many new vertues, which
will ever admire and serve you; and though it can
adde nothing to your owne rare and unparalleled
knowledge, yet may it to those noble good ones,
(which will indeavour any small spark of your imitation)
bring such a light as may make them shine with
a great deal of charity. I do not assume to my selfe,
(though I am not altogether ignorant in ability to
judge of these things) the full intention, and scope of
this whole work: for it is true, great Lady, that much
of it was a Manuscript, which many years agoe be-
longed

The Epistle Dedicatory.

longed to an Honourable Countesse, one of the greatest Glories of our Kingdome, and were the opinions of the greatest Physicians which then lived; which being now approved by one not inferiour to any of the profession, I was the rather imboldned to send it to your blessed hand, knowing you to be a Mistresse so full of Honourable piety and goodnesse, that although this imperfect offer may come unto you weak and disable, yet your noble vertue will support it, and make it so strong in the world, that I doubt not but it shall doe service to all those which will serve you, whilst my selfe and my poor prayers shall to my last gasp labour to attend you.

The true admirer of your
Noble vertues,

Gervase Markham.

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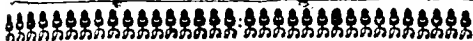
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THE APPROVED
BOOKE
 CALLED THE
ENGLISH HOUSE-WIFE,

CONTAINING

All the vertuous Knowledges and Actions both of mind and body, which ought to be in any compleat House-wife of what degree or calling soever.

The Second Book.

CHAP. I.

Of the inward vertues of the mind, which ought to be in every Housewife. And first of her general knowledges both in Physick and Surgery, with plain approved medicines for health of the Household; also the extraction of excellent Oyles fit for those purposes.



Having already in a summary briefness passed through those outward parts of Husbandry which belong unto the perfect Husbandman, who is the Father and Master of the Family, and whose Office and employments are ever for the most part abroad, or removed from the house, as in the Field or yard: It is now meet, that we descend in as orderly a Method as wee can, to the office of our *English Housewife*, who is the mother and Mistresse of

the family, and hath her most generall employments within the house ; where from the generall example of her vertues, and the most approved skill of her knowledges those of her Family, may both learn to serve God, and sustain man in that godly and profitable sort, which is required of every true Christian.

A Hus-wife
must be religi-
ous.

First then to speak of the inward vertues of her mind, she ought, above all things, to be of an upright and sincere Religion, and in the same both zealous and constant, giving by her example, and incitement and spur, unto all her family to pursue the same steps, and to utter forth by the instruction of her life, those vertuous fruits of good living, which shall be pleasing both to God and his creatures. I do not mean that herein she should utter forth that violence of spirit, which many of our (vainly accounted pure) women do, drawing a contempt to the ordinary Ministry, and thinking nothing lawfull but the fantasies of their own invention, usurping to themselves a power of preaching and interpreting the holy Word, to which only they ought to be but hearers and believers, or at the most but modest perswaders ; this is not the office either of good Housewife, or good woman. But let your English Housewife be a godly, constant, and Religious woman, learning from the worthy Preacher and her Husband, those good examples which she shall with all carefull diligence see exercised amongst her Servants.

In which practise of hers, what particular rules are to be observed, I leave her to learn of them who are professed Divines, and have purposely written of this argument ; only thus much will I say, which each ones experience will teach him to be true, that the more carefull the master and mistress are to bring up their servants in the dayly exercises of Religion toward God, the more faithfull they should find them in all their businisses towards men, and procure Gods favour the more plentifully on all the household : and therefore a small time, morning and evening bestowed in Prayers and other exercises of Religion, will prove no lost time at the weeks end.

She must be
temperate.

Next unto her sanctity and Holiness of life, it is meet that

that our English Houſwife be a woman of great modeſty and temperance, as well inwardly as outwardly : Inwardly, as in her behaviour and carriage towards her Husband, wherein ſhe ſhall ſhun all violence of rage, paſſion and humour, coveting leſſe to direct then to be directed, appearing ever unto him pleaſant, amiable, and delightfull ; and, though occaſion of miſhaps, or the miſ-government of his will may induce her to contrary thoughts, yet virtuously to ſuppreſs them, and with a mild ſufferance rather to call him home from his error, then with the ſtrength of anger to abate the leaſt ſpark of his evil, calling into her mind that, evil and uncomely language is deformed though uttered even to ſervants, but moſt monſtrous and ugly when it appears before the preſence of a Husband : Outwardly, as in her apparel and dyet, both which ſhe ſhall proportion according to the competency of her Husbands eſtate and calling, making her circle rather ſtrait then large : for it is a rule, if wee extend to the uttermoſt, wee take away increaſe ; if wee goe a haires breath beyond, wee enter into conſumption : but if we preſerve any part, we build ſtrong forts againſt the adverſaries of fortune, provided that ſuch preſervation be honeſt and conſcionable : for as laſh prodigality is brutiſh, ſo miſerable covetouſneſs is helliſh. Let therefore the Houſewives garments be comely and ſtrong, made as well to preſerve the health, as to adorn the perſon, altogether without toyiſh garniſhes, or the głoſs of light colours, and as far from the vanity of new and fantaſtick faſhions, as neer to the comely imitation of modeſt Matrons. Let her dyet be whoſome and cleanly, prepared at due hours, and Cooke with care and diligence, let it be rather to ſatiſſie nature, then our affections, and apter to kill hunger then revive new appetites ; let it proceed more from the proviſion of her own yard, then the furniture of the Markets ; and let it be rather eſteemed for the familiar acquaintance ſhe hath with it, then for the ſtrangeneſs and rarity it bringeth from other Countreies.

Other Garments.

Of her Dyet.

To conclude, our English Houſwife muſt be of chaſte thought Her general
 ſtout courage, patient, untired, watchfull, diligent, witty, plea- Vertues.
 ſant, conſtant in friendſhip, full of good Neighbour-hood,
 wife in Diſcourſe, but not frequent therein, ſharpe and quick

of speech, but not bitter or talkative, secret in her affaires, comfortable in her counsels, and generally skilfull in the worthy knowledges which do belong to her vocation ; of all, or most whereof, I now in the ensuing discourse intend to speak more largely.

Of her vertues
Of her know-
ledge in Phy-
sick.

To begin then with one of the most principall vertues which do belong to our English House-wife ; you shall understand, that sith the preservation and care of the family touching their health and soundnesse of body consisteth most in the diligence of her, it is meet that she have a physicall kind of knowledge, how to administer many wholsome receipts or medicines for the good of their healths, as well to prevent the first occasion of sickness, as to take away the effects and evill of the same, when it hath made scasure on the body. Indeed we must confesse that the depth and secrets of this most excellent Art of Physick, are far beyond the capacity of the most skilfull woman, as Lodging only in the breast of learned professors, yet that our Housewife may from them receive some ordinary rules and medicines, which may avail for the benefit of her Family, is (in our common experience) no derogation at all to that worthy Art. Neither do I intend here to load her mind with all the Symptomes, accidents, and effects which go before or after every sickness, as though I would have her to assume the name of a Practitioner, but only relate unto her some approved medicines, and old Doctrines which have been gathered together, by two excellent and famous Physitians, and in a Manuscript given to a Great worthy Countesse of this Land, (for far be it from me to attribute this goodnesse unto mine own knowledge) and delivered by my common and ordinary experience, for the curing of those ordinary sicknesses which dayly perturb the health of men and women.

Dr. Barker.
Dr. Bomesius.

Of Fevers in
generall.

First then to speak of Feavers or Agues ; the Housewife shall know those kinds thereof, which are most familiar and ordinary as the *Quotidian* or dayly Ague, the *Tertian* or every other dayes ague, the *Quartian* or every third dayes ague, the Pestilient, which keepeth no order in his fits, but is more dangerous and mortal : And lastly, the accidentall Fever, which proceedeth from the receit of some wound, or other painfull Perturbation
of

of the spirits. There be sundry other Feavers, which comming from Consumptions, and other long continued sicknesses, do altogether surpass our House wifes capacity.

First then for the *Quintana* (whose fits alwaies last above twelve hours) you shall take a new laid egg, and opening the eown, you shall put over the white, then fill up the shell with good *Aquavive*, and stir it and the yolk very well together, and then as soon as you feel your cold fit begin to come upon you, sup up the egg, and either labour till you sweat, or else laying great store of cloaths upon you, put your selfe in a sweat in your bed; and thus do while your fits continue; and for your drink, let it be only posset ale.

Of the quotidian.

For a single *Tertian* feaver, or each other dayes ague, take a quart of posset ale, the curd being well drained from the same, and put thereunto a good handful of *Dandelion*: and then setting it upon the fire, boil it till a fourth part be consumed, then as soon as your cold fit beginneth, drink a good draught thereof, and then either labour till you sweat, or else force your selfe to sweat in your bed: but labour is much the better, provided that you take not cold after it, and thus do while your fits continue, and in all your sickness, let your drink be posset ale, thus boiled with the same herb.

Of the single Tertian.

For the accidentall Feaver, which cometh by means of some dangerous wound received, although for the most part it is an ill signe, if it be strong and continuing, yet many times it abateth, and the party recovereth when the wound is well tended and comforted with such severall balms, and hot oyles: as are most fit to be applied to the member so grieved or injured: therefore in this Feaver you must respect the wound from whence the accident proceed, and as it recovereth, so shall you see the Feaver wane and diminish.

Of the accidental Feaver.

For the *Hætic* Feaver, which is also a very dangerous sickness, you shall take the oyl of Violets, and mix it with a good quantity of the powder of white *Poppy-seed* finely searst, and therewith annoint the small and reins of the parties back, evening and morning, and it will not only give ease to the Feaver, but also purge and cleanse away the dry scalings, which is ingendred either by this, or any other Feaver whatsoever.

Of the Feaver hætic.

For the quartan or for any fever.

For any feaver whatsoever, whose fit beginneth with a cold, Take a spoonful and a half of Dragon water, a spoonful of Rose-water, a spoonful of runningwaer a spoonful of *Aquavie*, a spoonful of Vinegar, and half a spoonful of *M. hyris e*, or lesse, and beat all these well together, and let the party drink it before his fit begin.

Of thirst in fevers.

It is to be understood, that all feavers of what kind soever they be, and these infectious diseases, as Pestilences, Plague, and such like, are thought the inflammation of the blood, and infinitely much subject to drought; so that, should the party drink so much as he desired, neither could his body containe it, nor could the great abundance of drink do other then weaken his stomach, and bring his body to certaine destruction.

Wherefore when any man is so overspessed with desire of drink, you shall give him at convenient times, either possetale made with cold herbs. as sorrel, purslin, Violet leaves, Lettice, Spinnage, and such like, or else a Julip made as hereafter, in the pestilent feaver, or some Almond milk; and betwixt those times, because the use of these drinks will grow wearisome and loathsome to the patient, you shall suffer him to gargle in his mouth good wholsome beer or ale, which the patient best liketh, and having gargled it in his mouth, to spit it out again, and then to take more: and thus to do as oft as he pleaseth, till his mouth be cooled: provided, that by no means he suffer any of the drink to go down; and this will much better asswage the heat of his thirst, then if he did drink: and when appetite directh drink to go down, then let him take either his Julip or his Almond milk.

For any ague fore.

To make a pultis to cure any ague fore, take elder leaves, and seeth them in milk till they be soft, then take them up and strain them, and then boil it again till it be thick, and so use it to the fore as occasion shall serve.

The quartane Fever.

For the Quartan Feaver, or third day ague, which is of all Feavers the longest lasting, and many times dangerous Consumptions, black Jaundies, and such like mortal sicknesses fellow it: you shall take Mithridate, and spread it upon a Lemon slice, cut of a reasonable thicknesse, and so as the Len on

be

be covered with the Mithridate ; then bind it to the pulse of the sick mans wrist of his arm, about an hour before his fit doth begin, and then let him go to his bed made warm, and with hot cloaths laid upon him, let him try if he can force himselfe to sweat : which if he do, then half an hour after he hath sweat, he shall take hot posset-ale brewed with a little Mithridate, and drink a good draught thereof, and rest till his fit be pass'd over : but if he be hard to sweat, then with the said posset ale, also you shall mix a few bruised Aniseeds, and that will bring sweat upon him : and thus you shall do every fit, till they begin to ease, or that sweat come naturally of its own accord, which is a true and manifest sign that the sicknesse decreaseth.

To make a sweat.

For the Pestilent Feaver which is a continuall sicknesse full of The pestilent infection and mortality, you shall cause the party first to be let blood, if his strength will bear it : then you shall give him cool Julips made of Eulive or Suctory water, or the syrop of Violets, conserve of Barbaries, and the juyce of Lemons wel mixed and symbolized together.

Also you shall give him to drink Almond-milk, made with the decoction of cool herbs, as Violet leaves, strawberry leaves, french mallowes, pisseine, and such like ; and if the parties mouth shall through the heat of his stomach, or liver, inflame, or grow sore, you shall wash it with the syrop of Mulberries and that will not only heal it, but also strengthen his stomach. If (as it is most common in this sicknesse) the party shall grow cossive, you shall give him a suppository made of honey boyld to the height of hardnesse, which you shall know by cooling a drop thereof, and so if you find it hard, you shall then know that the honey is boyld sufficiently ; then put salt to it, and so put it in water and work it into a roul in manner of a suppository, and administer it, and it most assuredly bringeth no hurt, but ease to the party, of what age or strength fever he be : during his sickness you shall keep him from all manner of strong drinks, or hot spices, and then there is no doubt of his recovery.

To preserve your body from the infection of the plague, you shall take a quart of old ale, and after it hath risen upon

A preservati-
on against the
the plague.

the fire, and hath been scummed, you shall put therein of *Asiatica longa*, of *Anise seed*, and of *Carduus*, of each half a handfull, and boyl them well therein; then strain the drink through a cleane cloath, and dissolve therein a drame of the best *Mithridate*, as much *Wine*; finely powdered and leaste, and six spoonfulls of *Wine* water, then put it up in a close glasse; and every morning fasting, take five spoonfulls thereof, and after bite and chaw in your mouth, the dried root of *Anelica*, or smell on a nosegay, made of the taffeld end of a ship rope, and they will surely preserve you from infection.

For infection
of the plague

But if you be infected with the plague, and feel the assured signs thereof, as pain in the head, drought, burning, weaknesse of stomack, and such like: Then you shall take a dram of the best *Mithridate*, and dissolve it in three or four spoonfulls of *Dragon* water, and immediately drink it off, and then with hot cloaths or bricks made extreame hot, and laid to the soles of your feet: after you have been wrapt in woollen cloaths compell your selfe to sweat, which if you do, keep your selfe moderately therein, till the sore begin to rise; then to the same apply a live pidgeon cut in two parts, or else a plaister made of the yolk of an egg, hony, herb of grace chopt exceeding small, and wheat flower, which in very short space will not only ripen, but also break the same without any other incision; then after it hath run a day or two, you shall apply a plaister of *Milelot* unto it, untill it be whole.

For the Pestilence.

Take *Fetherfew*, *Mileslot*, *Scabious*, and *Mugwort*, of each a like, bruise them and mix them with old ale, and let the sick drink thereof six spoonfulls, and it will expell the corruption.

Another.

Take *Tarrow*, *Tansie*, *Fetherfew*, of each a handfull, and bruise them well together, then let the sick party make water in the herbs, then straine them, and give it the sick to drink.

A preservati-
on against the
pestilence.

Take of *Sage*, *Rue*, *Brier leaves*, or *Elder leaves* of each an handfull, stamp them and strain them with a quart of white wine, and put thereto a little *Ginger*, and a good spoonfull of the best *Treacle*, and drink thereof morning and evening.

Take

Take *Smalts*, *g.*, *Mallows*, *Wormwood* and *Rue* Item, well together, and fry them in *Oile*, till they be a plaster-will apply it to the place where you would have rise, and let it lie untill it break, then to heal it up, take the juice of *Swallow*, *Worm flower*, and milk, and boill them to a pulvis, and apply it morning and evening till it be whole.

Take of *Borage*, *Long beef*, and *Calament*, of each a good handfull, of *Amyntum*, *Red mint*, *Violets*, and *Margolide*, of each half a handfull, boyl them in white wine, or fair running water, then add a penny worth of the best *Saffron*, and as much *Sage*, and boyl them over again well, then strain it into an earthen pot, and drink thereof morning and evening, to the quantity of seven spoonfulls.

Take *Linseed* and *Lettice*, and bruise it well, then apply it to the stomach, and remove it once in four hours.

For the Head-ach, you shall take of *Rose-mare*, of the juice of *Camomil*, of *Worms milk*, of strong wine vinegar, of each two spoonfulls, mixe them together well upon a chaffing dish of coals; then take a piece of a dry *Rose-cake*, and steep it therein, and as soon as it hath drunk up the liquor, and is thoroughly hot, take a couple of sound *Nutmegs*, grated to powder, and strew them upon the rose cake, then breaking it into two parts, bind it on each side, upon the temples of the head, so let the party lie down to rest; and the pain will in a short space be taken from him.

For *Frenzy*, or inflammation of the cauls of the brain, you shall cause the juice of *Beris* to be with a Syringe squirted up into the patients nostrils, which will purge and cleanse his head exceedingly; and then give him to drink posset ale, in which *Violet leaves* and *Lettice* hath been boyled, and it will suddenly bring him to a very temperate mildness, and make the passion of the Frenzy forsake him.

For the *Lethargy*, or extream drowsiness, you shall by all violent means, either by noise or other disturbances, force perforce keep the party from sleeping; and whensoever he call for drink, you shall give him white wine and *Ilop* water, of each a little quantity mixt together, and not suffer him to

above four hours in four and twenty, till he come to his former wakefulness, which as soon as he hath recovered, you shall send forthwith purge his head with the juyce of *harts* squirted up into his nostrils as it is before shewed.

ac But if any of the family be troubled with too much wakefulness, so that they cannot by any means take rest, then to provoke the party to sleep, you shall take of *Saffron*, a Dram dried and beaten to powder, and as much *Lettice seed* also dried and beaten to powder, and twice as much *Poppy seed* beaten also to powder, and mixe these with womans milk, till it be a thick salve, and then bind it to the temples of the head, and it will soon cause the party to sleep, and let it lie on not above four hours.

For the swimming of the head. For the swimming or dizzing in the head you shall take of *Agnus castus*, of *Broom wort*, and of *Camomile* dried, of each two drams mixt with the juyce of *ivy*, oil of *Roses*, and white wine, of each a like quantity, till it come to a thick salve, and then bind it to the temples of the head, and it will in short space take away the griefe.

For the palsey For the Apoplexy or Palsie, the strong scent or smell of a Fox is exceeding soveraign, or to drink every morning halfe a pint of the decoction of *Lavender*, and to rub the head every morning and evening exceeding hard, with a very clean course cloath, whereby the humours may be dissolved and disperst into the outward parts of the body: by all means for this infirmity, keep your feet safe from cold or wet, and also the nape of your neck; for from those parts it first getteth the strength of evill and avoidable pains.

For a new cough. For a cough or cold but lately taken, you shall take a spoonful of *Sugar* finely beaten and searst, and drop into it of the best *Aquavive*, untill all the *Sugar* be wet through, and can receive no more moisture: then being ready to lie down to rest, take and swallow the spoonful of *Sugar* down, and so cover you warm in your bed, and it will soon break and dissolve the cold. But if the cough be more old and inveterate, and

For an old cough. more inwardly fixt to the lungs, take of the powder of *Betony*, of the powder of *Carraway seeds*, of the powder of *Sherbit* dried, of the powder of *Honuds tongue*, and of *Pepper* finely beaten

beaten, of each two drams, and mingle them well with clarified *Mell*; make an electuary thereof and drink it morning and evening for nine dayes together; then take of *Sugar candi* coarsly beaten, an ounce of *Lemon* finely pared and trimmed, and cut into very little small slices, as much of *Alexiter* and *Coriander seeds*, halfe an ounce, mix all these together, and keep them in a paper in your pocket, and ever in the day time when the cough offendeth you, take as much of this dredg as you can hold between your thumb and fingers, and eat it, and it will give ease to your grief: and in the night when the cough taketh you, take of the ioyce of *Lemon*, as much as two good barley corne, and let it melt in your mouth, and it will give you ease.

Although the falling sicknesse be seldome or never to be cured, For the falling if the party which is troubled with the same, will but morning and evening, during the wane of the moon, or when she is in the sign *Virgo*, eat the berries of the herb *Alexiter*, or bear the herbs about him next to his bare skin, it is likely he shall find much ease, and fall very seldome, though this medicine be somewhat doubtful.

For the falling evill; take, if it be a man, a female *mole*; if a woman, a male *mole*, and take them in *March*, or else *April*, when they go to the Buck; then dry it in an oven, and make powder of it whole as you take it out of the earth, then give the sick person of the powder to drink evening and morning for nine or ten daies together.

To take away deafnesse, take a gray *Ele* with a white belly, and put her into a sweet earthen pot quick, and stop the pot very close with an earthen cover, or some such hard substance: then dig a deep hole in a horse dunghill, and set it therein, and cover it with the dung, and so let it remain for a fortnight, and then take it out and cleare out the oyl which will come of it, and drop it into the imperfect ear, or both, if both be imperfect.

An Oyl to help hearing.

To stay the flux of the Rhume, take Sage and dry it before the fire, and rub it to powder, then take bay salt and dry it, and beat it to powder, and take a Nutmeg and grate it, and mixe them altogether, and put them in a long linnen bag, then heat it upon a tile stone, and lay it to the nape of the neck.

For the rhume.

For a stinking
breath.

For a stinking breath, take Oshbu is when they are new bud-
ded out, and distill them, then let the party grieved nine mor-
nings, and nine evenings, drink of it; then forbear a while, and af-
ter take it again.

A vomit for
an ill breath.

To make a vomit for a strong stinking breath, you must
take of *Animumm* the weight of three barley corns, and beat
it very small, and mixe it with conserve of Roses, and give the
Patient to eat in the morning, then let him take nine dayes
together the juyce of Mints and Sage, then give him a gentle
purgation, and let him use the juyce of Mint and Sage longer.
This medicine must be given in the spring of the year; but if the
infirmity come for want of digestion in stomach, then take *Mint*,
Marjoram and *Wormwood*, and chop them small, and boyl them
in *Malmsey* till it be thick, and make a plaister of it, and lay it to
the stomach.

For the tooth-
ach.

For the *Tooth-ach*, take a handful of *Daisie roots*, and wash
them very clean, and dry them with a cloath, and then stamp them:
and when you have stamped them a good while, take the quantity
of half a nut-shell full of bay salt, and strew it amongst the roots,
and then when they are very well beaten, strain them through a
clean cloath; then grate some *Calamus Aromaticus*, and mix it
good and stiffe with the juyce of the roots, and when you have
done so, put it into a quill, and stuff it up into your nose, and
you shall find ease.

Another.

Another for the *Tooth-ach*, take small *Sage*, *Rue*, *Smallage*, *Fet-
terfew*, *Wormwood*, and *Mints*, of each of them half a handful, then
stamp them well altogether, putting thereto four drams of *Vine-
gar*, and one dram of *Bay salt*, with a peny worth of good *A-
gnesvint*. stir them all well together; then put it between two lin-
nen clouts, of the bignesse of your cheek, temples, and jaw, and
quilt it in a manner of a coorse imbroydery: then set it upon a
chafing dish of coals, and as hot as you may abide it, lay it over the
side where the pain is, and lay you down upon that side, and as it
cools warme it againe, or else have another ready warme to
lay on.

A drink for a
pearle in the
eye.

To make a drink to destroy any pearle or film in the eye: take
a good handful of Marigold plants: and a handful of Fennel, as
much of May-weed, beat them together, then strain them with a
pine

pint of beer, then put it into a pot and stop it close, that the strength may not goe out : then let the offended party drinke thereof when he is in bed, and lye of that side on which the pearl is, and likewise drink of it in the morning next his heart when he is risen.

For pain in the eyes, take Milke when it comes new from the Cow, and having filled it into a clean vessel, cover it with a pewter dish, and the next morning take off the dish, and you shall see a dew upon the same, with that dew wash the pained eyes and it will ease them.

For dim eyes, take Wormwood beaten with the gall of a Bull, and then strain it, and annoynt the eyes therewith, and it will clear them exceedingly.

For sore eyes, or blood-shot eyes : take the white of an egge beaten to oyle, as much Rose water, and as much of the juyce of Houssleek, mixe them well together, then dip flats, pleagants therein, and lay them upon the sore eyes, and as they dry, so renew them again and wet them ; and thus do, till the eyes be well.

For watery eyes, take the juyce of *Affodill*, *Mirihe*, and *Saffron* of each a litle, and mixe it with twice so much white wine, beyl it over the fire, then strain it and wash the eye therewith, and it is a present help.

For a Canker, or any sore mouth ; take Chervile and beat it to a salve with old Ale and Allom water, and annoynt the sore therewith and it will cure it.

For any swelling in the mouth, take the juyce of Wormwood, Cammomil, and Shirwit, and mixe them with hony, and bath the mouth swelling therewith and it will cure it.

For the Quinsie or Squinancy, give the party to drink the hearb *Moufear* steep in ale or beer, and look where you see a sic Swine rub himself, and there upon the same place rub a sleight-stone, and then with it sleight all the swelling, and it will cure it.

If you would not be drunk, take the powder of Bettony and Coleworts mixt together ; and eat it every morning fasting, as much as will lye upon a fixe pence, and it will preserve a man from drunkenness.

To quicken the Wit. To quicken a mans wits, spirit it, and memory ; let him take Lantibet, which is gathered in *June* or *July*, and beating it in a clean mortar, let him drink the juyce thereof with warm water, and he shall find the benefit.

For the King's Evil. If a man be troubled with the King's evil, let him take the red Dock, and seeth it in Wine till it be very tender, then strain it and so drink a good draught thereof, and he shall find great ease from the same ; especially if he do continue the use thereof.

Additions to the particular sicknesses ; and first of the head and the parts thereof, and the lungs. Take Frankincense, Doves dung, and Wheat flower, of each an ounce and mixe them well with the white of an Egge, then playsterwise apply it where the pain is.

The oyl of Lillies, if the head be annoynted therewith, is good for any pain therein.

Take Rew, and steep it in Vinegar a day and a night, the Rew being well bruised ; then with the same annoynt the head twice or thrice a day.

Another. For the head-ach, and to stay bleeding at the Nose. Take the white of an Egge and beat it to oyl, then put it to Rosewater, and the powder of Alablaster, then take flax and dip it therein, and lay it to the temples, and renew it two or three times a day.

To draw out bones broken in the head. Take Agrimony and bruise it, and playster-wise apply it into the wound, and let the party drink the juyce of Bettony, and it will expell the bones, and heal the wound.

For the falling of the mould of the head. Take the leaves of Agrimony, and boyl them in hony, till it be thick like a playster, and then apply it to the wound of the head warm.

The Squinancy. Take a Table-napkin, or any linnen cloath, and wet it in cold water, and when you go to bed apply it to the swelling, and lye upright ; thus do three or four times in a night, till the swelling waste.

The Tooth ache. Take two or three Dock roots, and as many Daisie roots, and boyl them in water till they be soft, then take them out of the water, and boyl them well over again in Oyle Olive, then strain them through a clean cloath, and annoynt the pained tooth therewith. and keep your mouth close, and it will not only take away the pain, but also ease any megrim or grief in the head.

To make teeth white. Take a sawcer of strong Vinegar, and two spoonfulls of the powder

powder of *Rosach-arbome*, a spoonfull of white salt, and a spoonfull of hony: seeth all these till it be as thin as water then put it into a close vial and keep it, and when occasion serves wash you teeth therewith, with a rough cloath, and rub them soundly: but not too hard.

Take some of the green of the Elder-tree, or the apples of Oak To draw teeth
trees, and with either of these rub thy teeth and gums, and it will wick out iron.
loosen them so, as you may take them out.

Take Sage and Galt, of each alike, and stamp them well together, Teeth that are
then bake it till it be hard, and make a fine powder thereof, then yellow.
therewith rub the teeth evenings and mornings, and it will take
away all yellownesse.

First let them bloud, then take *Harts horn* or *Ivory*, and red For teeth that
Pimpernel, and bruise them well together; then put it into a are loose.
linnen cloath, and lay it to the teeth, and it will fasten
them.

Take the juyce of *Lovage*, and drop it into the ear, and it will For any ve-
cure any venome, and kill any worm, ear-wig, or other ver- neme in the
mine. ear.

Take two ounces of *Cumme*, and beat it in a mortar to fine For a stinking
powder; then boyl it in white wine from a pottle to a quart, then breath which
drink thereof morning and evening as hot as you can suffer: cometh from
or otherwise, take an ounce of wild *time*, and being clean wa- the stomach.
shed, cut it small, and then powder it; then put to it half an
cunce of *pepper* in fine powder, and as much *Coriander*, mixe them
all well together and boyl them in a pottle of white Wine, till
half be consumed. and after meal (but not before) use to drinke
thereof hot, also once in the afternoon, and at your going to bed;
and it will purge the breath.

Take red Nettles and burn them to powder; then adde a For stinking
much of the powder of *Pepper*, and mixe them very well together. nostrils.
and snuffe thereof up into the nose, and thus do divers times a
day.

Take old Ale, and having boyled it on the fire, and cleansed it, For a Canker
adde thereto a pretty quantity of life hony, and as much *Allome*, in the nose.
and then with a ferrindge or such like, wash the sores therewith
very warm.

Take a gallon of running water, and boyl it to a pottle; then for any canker
A red water
put

put to it a handful of red Sage a handfull, of Celladines, a handfull, of Hony-suckles, a handfull of Woodbine leaves and flowers ; then take a pennyworth of grains made into fine powder, and boyl all very well together : then put to it a quart of the best life-hony of a year old, and a pound of Roeh Allom, let all boyl together till it come to a pottle, then strain it and put it into a close vessel, and therewith dresse and annoynt the sores as occasion serves : it will ease any canker or Ulcer, and cleanse any wound ; it is best to be made at *Midsummer*.

To clear the eyes.

Take the flowres and roots of *Primroses* clean washt in running water, then boyl them in fair running water till the space of an hour, then put thereto a pretty quantity of white *Copperas*, and then strain all through a linnen cloath, and so let it stand a while and there will an oyl appear upon the water, with that oyl annoynt the lids and the browes of your eyes, and the temples of your head, and with the water wash your eyes, and it is most soveraign.

Another for the sight.

Take fifteen seeds of *Gynepers*, and as many *Gromwell* seeds, five branches of *Fenne*, beat them also together, then boyl them in a pint of old Ale, till three parts be wasted ; then strain it into a glasse, and drop thereof three drops into each eye at night, and wash your eyes every morning for the space of fiftene dayes with your own water, and it will clear any decayed sight whatsoever.

For sore eyes.

Take red Snales, and seeth them in fair water, and then gather the oyl that ariseth thereof, and therewith annoynt your eyes morning and evening.

For sick eyes.

Take a gallon or two of the dreggs of strong Ale, and put thereto a handfull or two of *Comine*, and as much salt, and then distill it in a Limbeck, and the water is most precious to wash Eyes with.

For bleered eyes.

Take Celladine, Rue, Chervile, Plantain, Annise, of each like and as much *Fennel* as of all the rest, stamp them all well together, then let it stand two dayes and two nights then strain it very well and annoynt your eyes morning and evening therewith.

For the pin and web in the eye.

Take an egge, and roast it extream hard, then take the white being very hot, and lap in it as much white *Copperas* as a pease,

pease, and then violently strain it through a fine cloath, then put a good drop thereof into the eye, and it is most sovereign.

Take two drams of prepared Tullia. of Sandragon one dram, A powder for
of Sugar a dram; bray them all well together till they be exceed- the pin and
ing small, then take of powder, and blow a little thereof into the web in the
eye and it is sovereign eyes.

Take of red Rose leaves, of Smillage, of Maiden hair, Euface, A precious
Endive, Saccory, red Fennel, Hil-wort, and Celandine, of each water for the
halfe a quarter of a pound, wash them clean, and lay them in steep eyes.
in white wine a whole day: then distill them in an ordinary Salt,
and the first water will be like gold, the second like silver, and
the third like balm; any of these is most precious for sore eyes, and
hath recovered sight lost for the space of ten years, having been
used but four dayes.

Take the leaves of willow, and boil them well in oyl, and To make hair
therewith anoint the place where you would have any hair to grow.
grow whether upon head or beard.

Take Treacle water and hony boil them together, and wet Another.
a cloath therein, and lay it where you would have hair to grow,
and it will come speedily.

Take nine or ten eggs, and rost them very hard, then put away For a pimpled
the yolkes; and bray the whites very small, with three or four or red sawcy
ounces of white Copperas, till it be come to perfect oyntment;
then with it annoint the face morning and evening, for the space
of week and more face.

Take the rind of Hyssop, and boil or burn it, and let the fume or For the
fume go into the mouth, and it will stay any rhume falling from rheum.
the head.

Take a pint of running water, and three spoonfulls of hony, and For hoarsness
boyl them together: and scum off the filth, then put thereto one in the throat.
ounce of small Rayfins, and strain it well through a cloath, and so
drink it morning and evening.

Take Aquavivæ and salt, and mix it with strong old Ale, and For a dange-
when hear it on the fire, and therewith wash the soles of the feet rous cough,
when you go to bed.

Take of clean wheat, and of clean barley, of each a like quan- For a dry
tys, and put them into a gallon and a half of fair water, and boil cough.
C them

them till they burst, then strain it into a clean vessel, and add thereto a quarter of fine *Lycoris* powder, and two penny worth of *gumme Arabick*, then boyl it over again and strain it, and keep it in a sweet vessel, and drink thereof morning and evening.

For the tick. Take the best wort, and let it stand till it be yellow, then boyl it, and after let it cool, then put to it a little quantity of *Barm* and *Saffron*, and so drink of it every morning and evening while it lasteth: otherwise, take *Horehound*, *Violet leaves*, and *Ispop*, of each a good handfull, seeth them in water, and put thereto a little *Sugar*, *Lycoris*, and *Sugar-candy*, after they have boiled a good while, then strain it into an earthen vessel, and let the sick drink thereof six spoonfulls at a time morning and evening; or lastly, take the lungs of a Fox, and lay it in rose water, or boyl it in rose water, then take it out, and dry it in some hot place without the sun; then beat it to powder with *Sugar candy*, and eat of this powder morning and evening.

For griefs in the Stomack. To ease the pain in the stomach, take *Endive*, *Mints*, of each a like quantity, and steep them in white wine a dayes space; then straining and adding thereunto a little *Cinnamon* and *Pepper*, give it to the sick person to drink, and if you add thereto a little of the powder of *Horse mint* and *Calamint*, it will comfort the stomach exceedingly, and occasion swift and good digestion.

For Spitting of blood. For spitting of blood, whether it proceed of inward bruises, overstraining, or such like; you shall take some *pitch*, and a little *Sperma Ceti*, and mix it with old Ale, and drink it, and it will stay the flux of blood: but if by means of the bruise, any outward grief remain; then you shall take the herb *Brookthemp*, and frying it with sheeps tallow, lay it hot on the grieved place, and it will take away the anguish.

For vomiting. To stay the fluxe or vomiting, take *Wormwood*, and soar bread tosted, of each a like quantity, and beat them well in a mortar; then add to them as much of the juice of *Mints*, and the juice of *Plantain*, as will bring it to a thick salve: then fry them altogether in a frying pan, and when it is hot, lay it plaisterwise to the mouth of the stomach; then let the party drink a little white wine and *Chervile* water mixt together, and then steep some toasted bread in very strong vinegar, wrap it in a fine cloth, and let

let the sick party smell thereto, and it will stay the excessive of vomiting, and both comfort and strengthen the stomach.

If you would compell one to vomit, take half a spoonfull of *To force one Stone crop*, and mix it with three spoonfuls of white wine, and *to vomit.* give it to the party to drink, and it will make him vomit presently; but do this seldome, and to strong bodies, for otherwise it is dangerous.

For the *Hilaca passio*, take of Polypody an ounce, and stamp it; *For the Hilaca* then boyl it with Prunes and Violets, in Fennel water, or Anni- *passio.* seed water; take thereof a good quantity; then strain it, and let the party every morning and evening drink a good draught thereof.

If the stomach be troubled with wind or other pain, take *Additions* Commine, and beat it to powder, and mixe with it red wine, *to the diseases of the stomach.* and drink it at night when you go to bed divers nights together.

Take Brooklime-root and leaves, and wash them clean, and dry *For the stomach.* them in the sun, so dry, that you may make powder thereof; *For the Hilaca passio.* then take of the powder a good quantity, and the like of Treacle, and put them in a cup, with a pretty quantity of strong old Ale, and stir them well together, and drink thereof first and last, morning and evening, for the space of three or four dayes; and if need do require, use the same in the broaths you do eat, for it is very soveraign.

Take Harts-horn, or Ivory beaten to fine powder, and as much *For pain in the breast.* Cynamon in powder, mix them with Vinegar, and drink thereof, to the quantity of seven or eight spoonfuls.

Take the water of Mouseare, and drink thereof the quantity of *The mother.* an ounce and a halfe, or two ounces, twice or thrice a day: or otherwise take a little Nutmeg, a little Cloves, a little Mace, and a very little Ginger, and the flowers of Lavender, beat all unto a fine powder, and when the passion of the Mother commeth, take a chafingdish of good hot coals, and bend the patient forward, and cast of the powder into the chafingdish, so as she may receive the smoak both in at her nose and mouth, and it is a present cure.

Against obstructions in the Liver, take Anniseeds, Ameos, Bur- *Obstructions* net, Camomile, and the greater Centaury, and boyl them in white of the Liver: *wine*

Against the
heat of the
Liver.

wine with a little honey, and drink it every morning, and it will cure the obstructions, and cleanse the Liver from all imperfection.

Against the heat and inflammation of the Liver, take Endive dry'd to powder, and the meal of *Lupin* seeds, and mix it with Honey, and the juyce of Wormwood, make a cake thereof, and eat it, and it will assuage the great heat and inflammation of the Liver, and take away the pimples and redness of the face, which proceedeth from the same.

For the Plu-
rifie.

To prevent a plurisie a good while before it come there is no better way then to use much the exercise of ringing, or to stretch your arms upward, so as they may bear the weight of your body, and so swing your body up and down a good space; but having caught a Plurisie, and feeling the gripes, stitches, and pangs thereof, you shall presently cause the party to be let blood, and then take the herb *Althea*, or Holyhock. and boyl it with Vinegar and Linseed, till it be thick plaister-wise, and then spread it upon a piece of Allom-leather, and lay it to the side that is grievous, and it will help it.

A plaster for
a stitch.

To help a stitch in the side, or elsewhere, take Doves dung, red Rose leaves, and put them into a bag, and quilt it: then thoroughly heat it upon a chafin dish of coals, with vinegar in a platter: then lay it upon the pained place, as hot as may be suffered, and when it cooleth, heat it again.

Heat in the
Liver.

For any extraordinary heat or inflammation in the Liver, take Barberries, and boyl them in clarified whey, and drink them and they will cure it.

For the con-
sumption.

If you will make a Cordiall for a Consumption, or any other weaknesse, take a quart of running water, a piece of Mutton, and a piece of Veal, and put them with the water into a pot: then take of Sorrel, Violet leaves, Spinage Endive, Succory, Sage, leys, of each a good quantity; then take Prunes and Raisins. and put them all to the broth, and sceth them from a quart to a pint; then strain the yolk of an egg. and a little Saffron thereinto, putting in Sugar, whole Mace, and a little white wine; so sceth them a while together, and let the party drink it as warm as may be.

To staunch
blood,

To staunch blood, take the herb Shepherds purse, (if it may be gotten) distilled at the Apothecaries, and drink an ounce thereof at a time, morning and evening, and it will stay any flux of

of blood naturall or unnaturall, but if you cannot get distilled water, then boyl a handfull of the herbe with Cynamon, and a little Sugar, in Claret wine, and boyl it from a quart to a pint, and drink it as oft as you please: also, if you do but rub the herbe between your hands, you shall see it will soon make the blood returne.

For the Yellow Jaundise, take two penny worth of the best Eng. lish Saffron, dry it and grind it to exceeding fine powder; then mixe it with the pap of a roasted Apple, & give it the diseased party to swallow down in manner of a pill, and thus do divers mornings together, and without doubt it is the most present cure that can be for the same, as hath been often times proved. For the yellow jaundise.

For the Yellow Jaundise, take Pimpernel and Chick weed, stamp them and strain them into posset Ale; and let the party drinke thereof morning and evening.

For the yellow Jaundise, which is desperate, and almost past cure: Take sheeps dung new made, and put it into a cup of beer or Ale and close the cup fast, and let it stand so all night, and in the morning take a draught of the clearest of the drink, and give it unto the sick party.

For the Black Jaundise, take the hearb called penny royall, and either boyl it in white Wine, or drinke the juyce thereof simply by it self, to the quantity of three or four spoonfull at a time, and it will cure the black Jaundise. For the black jaundise.

Take of Hyssop, Parsly, and Harts-tongue, of each alike quantity, and seeth them in wort till they be soft, then let it stand till it be cold, and then drinke thereof first and last, morning and evening. Additions for the diseases of the Liver.

Take Fennel rootes, and parsly roots of each alike, wash them clean and pill off the upper bark, and cast away the pith within; then mince them small; then put them to three pints of water, and set them over the fire; then take figs and shred them small, take Lycoras and break it small, and put them to the herbs, and let all boyl very well. then take Sorrell and stamp it and put it to the rest, and let it boyl till some part be wasted, then take a good quantity of hony and put to it and boyl a while, then take it from the fire, and clarify it through a strainer into a glass vessel, and stop it very close; then give the sick to drinke thereof.

To heal a
Rog-worm
Comming
of the
Heat of the
Liver.
To staunch
blood.

theret morning and evening.

Take the stalk of Saint *Marys Garlicke*, and burn it, or lay it upon a hot tyle stone untill it be very dry, and then beat it into powder, and rub the sore therewith untill it be whole.

Take Wool in the Walkmills that commeth from the cloth and flath about like Darn and beat it into powder; then take thereof and mixe it with the white of an egg, and wheat flowre, and strup them together: then lay it on a linnen cloath or lint, and apply it to the bleeding place, and it will staunch it.

For great
danger in
bleeding.

If a man bleed and have no present help, if the wound be on the foot, bind him about the ankle; if in the legs, bind him about the knee; if it be on the hand, bind him about the wrist; if it be on the arm, bind him about the brawn of the arm, with a good liff and the blood will presently staunch.

For a stitch.

Take good store of *Cinnamon* grated, and put it into possat ale very hot and drink it, and its a present cure.

A bath for the
Leprosie.

Take a gallon of running water; and put to it as much salt as will make the water as salt as the Sea-water, then boyl it a good while, and bath the leggs therein as hot as may be suffered.

For the Drop-
sic.

For the Dropsie, take *Agnes casten*, *Fennel*, *Affodil*, dark *Wall-wort*, *Lupins* and *Wormwood*, of each a handfull, and boyl them in a gallon of white Wine untill a fourth part be consumed: then straine it and drinke it morning and evening half a pint thereof, and it will cure the Dropsie; but you must be carefull that you take not *Daffodil* for *Affodil*.



Pain in the
Spleen.

For pain in the Spleen, take *Agnes castus*, *Aggrimony*, *Aniseed*, *Century* the great and *Wormwood*, of each a handfull, and boyl them in a gallon of white Wine, then strain it, and let the patient drink divers mornings together half a pint thereof; and at his usual meals let him neither drink Ale, Beer, nor Wine, but such as hath had the hearb *Lamariske* steeped in the same, or for want of the herb, let him drink out of the cup made of *Lamariske* wood and he shall find remedy.

Pain in the
Liver.

For any pain in the side, take *Hogwert* and red *Sage* and lay it them betwee two tyle stones, and then put it into a bag, and dry to your side as hot as can be indurd.

For fatnesse
and short
breath.

To help him that is exceeding fat, purisie, and short breathed: take hony clarified, and bread unleavened, and make toasts of it,
and

and dip the coasts in the clarified honey, and eat this divers mornings with your meat.

Take a lump of Iron or Steel and heat it red hot, and quench it in Wine, and then give the wine to the sick party to drink.

Take *penel seeds* and the roots, boyl them in water, and after it is cleansed put to it honey, and give the party to drink; then seeth the herb in Oyl and Wine together, and playsterwise apply it to the side.

Make a playster of *Wormwood* boyled in Oyle, or make an ointment of the juyce of *Wormwood*, of *Vinegar*, *Armoniac*, *Wax*, and *Oyl*, mixed and melted together, and anoynt the sides therewith, either in the sun, or before the fire.

Take the powder of *Galena*, and mixe it with the juyce of *Sage*, and let the offended party drink it with sweet wine.

Take *Rosmary* & *Sage*, of each a handfull, & seeth them in white Wine or strong Ale, and then let the patient drink it luke-warm.

Take the juyce of *Fennell* mixt with hony, and seeth them together till it be hard, and then eat it evening and morning, and it will consume the fatnesse.

For the *Wind collick*, which is a disease both generall, and cruell, there be a world of remedies, yet none more approved than this which I will repeat: you shall take a *Nutmeg* sound and large, and divide it equally into four quarters: the first morning as soon as you shall rise, eat a quarter thereof; the second morning two quarters, and the third eat three quarters, and the fourth morning eat a whole *Nutmeg*, and so having made your stomach & taste familiar therewith, eat every morning whilst the *Collick* offendeth you, a whole *Nutmeg* dry without any composition, and fast over an hour at least after it, and you shall find a most unspeakable profit which will arise from the same.

For the *Wind collick*, take a good handfull of clean Wheat meal as it cometh from the Mill, and two eggs, and a little *White-wine*, and a little *Aquavite*, and mingle them together cold, and make a cake of it, and bake it on a gridyron with a soft fire, and turn it often, and tend it with blasting of *Aquavite* with a feather; then lay it somewhat higher then the pain is, rather then lower.

For the *Lake* or extreame scouring of the belly, take the seeds

of the Wood-rose, or Bryer-rose, beat it to powder, and mixe a dram thereof with an ounce of the conserve of Sloes, and eat it and it will in a short space bind and make the belly hard.

For the bloody flux. For the bloody-fluxe, take a quart of red wine, and boyl therein a handfull of Shepherds parse, till the hearb be very soft: then strain it, and add: thereto a quarter of an ounce of Cynamon, and as much of dried Tanners bark taken from the Ouz, and both beaten to fine powder; then give the party half a pint thereof to drink morning and evening, it being made very warm, and it will cure him.

To stay a lask. To stay a sore Lask, take Plantain water and Cynamon finely beaten, and the flowres of Pomgranates, and boyl them well together; then take Sugar & the yolk of an egge, and make a candle of it, and give the grieved party it.

For the flux. For the Flux take Stags pizzel dried and grated, and give it in any drink, either in Beer, Ale, or Wine, and it is most soveraign for any Flux whatsoever. So is the jaw bones of a Pike, the teeth and all dried and beaten to powder, and so give the party diseased fed in any drink whatsoever.

For the worst Flux. To cure the worst bloody flux that may be, take a quart of red wine, and a spoonfull of Commised, boyl them together untill half be consumed; then take Knot-grass and Shepherds parse and Plantain, and stamp them severall, and then strain them and take of the juyce of each of them a good spoonfull and put them to the wine, and so seeth them again a little: then drink it luke-warm, half over night, and half the next morning; & if it fall out to be in Winter, so that you cannot get the herbs, then take the water of the herbs distilled, of each three spoonfulls, and use it as before.

For costiveness. For extream costiveness, or binding in the body, so as a man cannot avoid his excrements; take Anniseeds, Fennigreek, Linseeds, and the Powder of Piony: of each halfe an ounce, and boyl them in a quart of white Wine, and drink a good draught thereof, and it will make a man go to the stool orderly, and at great ease.

For worms. For worms in the belly, either of child or man, take Aloes Cicotrine, as much as a half hazel Nut, & wrap it in the pap of a roasted Apple, and so let the offended party swallow it in the manner

manner of a pill fasting in the morning, or else mixe it with three or four spoonfulls of Muscadine, and so let the party drink it, and it is a present cure. But if the child be either so young or the man so weak with sicknesse, that you dare not administer any thing inwardly, then you shall dissolve your Aloes in the oyle of Savine, making it thick like Salve, then playsterwise spread it upon Sheeps leather, and lay it upon the navil and mouth of the Stomack of the grieved party, and it will give him ease; so will also unset Leeks chopt small and fryed with sweet butter, and then in a linnen bagge apply it hot to the navil of the grieved party.

Take a quart of red wine, and put to it three yolks of eggs, and a pennyworth of long Pepper and grains, and boyl it well, and drink it as hot as can be suffered: or otherwise, take an ounce of the inward bark of an oak, and a pennyworth of long Pepper, and boyl them in a pint and better of new Milk, and drink it hot first and last morning and evening.

Take an egge, and make a little hole in the top, and put out the white, then fill it up again with Aquavitæ, stirring the egge and Aquavitæ, till it be hard, then let the party eat the egg and it will cure him, or otherwise take a pint of red wine and nine yolks of eggs, and twenty Pepper corns small beaten, let them seeth untill they be thick, then take it off, and give the diseased party to eat nine spoonfulls morning and evening.

Take of Rue and Beets alike quantity, bruise them, and take the juyce, mixe it with clarified hony, and boyl it in red wine, and drink it warm first and last morning and evening.

Take Mercury, Cinkfoyl, and Mallows, and when you make pottage or broth with other herbs, let these herbs before named have most strength in the pottage, and eating thereof, it will give you two stools and no more.

Take two spoonfull of the juyce of Ivy leaves, and drink it three times a day, and it will dissolve the hardnesse.

Take the barke of the rootes of the Elder tree, and stamp it, and mixe it with old Ale, and drinke thereof a good hearty draught.

Take the crumms of white bread, and steep it in Milke with Ale, and adde Sugar unto it and eate it, and it will open the belly.

Take

For the stop-
ping of the
womb.

Take the Kernels of three Peach stones, and bruise them (even corns of cake pepper, and sliced ginger a greater quantity then of the pepper, pound all together greasily, and put it into a spoonfull of Sack (which is best) or else white Wine, or strong Ale, and drink it off in a great spoon, then fast two hours after, and walk up and down it you can; if otherwise, keep your selfe warm and beware.

For the Rup-
ture.

Take of *Larkes, Camfrey, Poised* of the Oak, and *Aventis* each half a handfull, two roots of *Osmund*, boyl them in strong Ale and Honey, and drinke thereof morning, noone, and night, and it will heale any reasonable rupture. Or otherwise take of *Smallage, Comfrey, Setwell, Polypody*, that grows on the ground like *feen, dandelies* and *more*, of each alike, stamp them very small, and boyl them well in Barm, untill it be thick like a poultice, and so keep it in a close vessel, and when you have occasion to use it, make it as hot as the party can suffer it, and lay it to the place grieved, then with a trusse, trusse him up close, and let him be very carefull for straining of himself, and in a few dayes it will knit: during which cure, give him to drink a draught of red wine, and put therein a good quantity of the flowre of fletcher, finely boulted, stirring it well together, and then fast an houre after.

For the stone.

For the violent pain of the stone, make a posset of milke and sack, then take off the curd, and put a handfull of *Communi* flowers into the drink, then put it into a pewter pot, and let it stand upon hot embers, so that it may dissolve; and then drink it as occasion shall serve. Otherwise for this grief, take the stone of an Oxe gall, and dry it in an Oven, then beat it to powder, and take of the quantity of a hazel nut, with a draught of good Ale, or white wine.

The Collick
and stone.

For the Collick and stone, take Hawthorn berries, the berries of sweet Bryers, and ashlen Keyes, and dry them every one severally untill you make them into powder, then put a little quantity of every one of them together, then if you think good, put to it the powder of *Licoris* and *Annis seeds*, to the intent the party may the better take it, then put in a quantity of this powder in a draught of white wine, and drink it fasting. Otherwise you may take *Smallage-seed, Parsley, Lovage, Saxifrage*, and broom-seed, of

Another.

each

each of them a little quantity, beat them into a powder, and when you feel a fit either of the diseases, eat of this powder a spoonfull at a time either in pottage, or else in the broth of a chicken, and so fast two or three hours after.

To make a powder for the collick and stone, take *ferre*, A powder for
perij-seed, *in seed*, and *carraway-seed*, of each the weight of sixe the Collick
 pence, of *ramis-seed*, *saxifrage seed* the roots of *ilapenda* a and and stone.
Lin-a of each the weight of twelve pence, of *galingal*, *spikenard*,
 and *Cinnamon*, of each the weight of eight pence, of *Sena* the
 weight of seventeen shillings good weight, beat them all to pow-
 der and searfe it, which will weigh in all twenty five shillings and
 six pence. This powder is to be given in white wine and sugar in
 the morning fasting, and so to continue fasting two hours after,
 and to take of it at one time the weight of ten pence, or twelve
 pence.

Other Physicians for the stone, take a quart of Rhenish or white Another.
 wine, and two lemons, and pare the upder rind thin, and slice
 them into the wine, and as much white soape as the weight of a
 groit, and boyl them to a pint, and put thereto sugar according
 to your discretion and so drink it, keeping your self warm in your
 bed, and lying upon your back.

For the stone in the reyns, take *Aniseos*, *Camomile*, *Mint*, *ten hair*,
Sparrow-tongue and *Philipen al'a*, each alike quantity, dry it in For the stone
 an oven, and then beat it to powder, and every morning drink half in the reins.
 a spoonfull thereof with a good draught of white wine, and it will
 help.

For the stone in the bladder, take a radish root and slit it cross For the stone
 twice, then put it into a pint of white wine and stop the vessel ex- in the bladder
 ceeding close: then let it stand all one night, and the next morn-
 ing drink it off fasting, and thus do divers mornings together,
 and it will help.

For the stone in the bladder, take the kernels of flaes, and dry A powder for
 them on a tile stone, then beat them into powder, then take the the stone in
 roots of *A exander*, *perij-seed*, *torr*, and *hol hock*, of every of their the bladder.
 roots a like quantity, and seeth them all in white wine, or
 else in the broth of a young chicken: then strain them into a
 clun-vessel, and when you drink of it, put into it halfe a spoon-
 full of the powder of flae kernels. Also if you take the oyle of
 Scor-

Scorpion, it is very good to annoynt the members, and the tender parts of the belly against the bladder.

A bathe for the stone.

To make a bath for the stone, take mallows, holi-hock, and lilly roots, & Linfeed, Pellitory of the wall, and seeth them in the broth of a Sheeps head, and bathe the Reines of the back therewith oftentimes, for it will open the straitnesse of the water conduits, that the stone may have issue & assuage the pain, & bring out the gravell with the Urine : but yet in more effect, when a playster is made and laid upon the reins and belly immediately after the bathing.

A water for the stone.

To make a water for the stone, take a gallon of new milk of a Red Cow, and put therein a handfull of Pellitory of the wall and a handfull of wild time, and a handfull of *Saxifrage*, & a handfull of *Parsly*, and two or three Radish roots sliced, and a quantity of *Philipendula* roots; let them lye in the milk a night, & in the morning putt the milke with the herbes into a still, & distil them with a moderate fire of Charcole or such like : then when you are to use the water, take a draught of Rhenish wine or white Wine, and put into it five spoonfulls of the distilled water, and a little Suger and Nutmeg sliced, and then drinke of it, the next day meddle not with it, but the third day doe as as you did the first day, and so every other day for a weekes space.

Difficulty of Urine.

For the difficulty of Urine, or hardnesse to make water, take Smallage, Dill, Anniseeds, & Burnet, of each alike quantity, & dry them & beat them to fine powder & drink half a spoonfull thereof, with a good draught of White wine.

For hot Urine.

If the Urine be hot & burning, the party shall rise every morning to goe to drinke a good draught of new Milke and Suger mixt together, and by all means to abstain from Beer that is old hard and tart, and from all meats and sawces which are sour and sharp.

For the Strangullion.

For the Strangullion, take *Saxifrage*, *Polypody* of the Oak; the root of beans, and a quantity of Raisins, of every one three handfull or more & then two gallons of good Wine, or else Wine lees, and put it into a Serpentry, & make thereof a good quantity, & give the sicke to Drinke Morning and Evening a spoonfull at once.

For

For them that cannot hold their water in the night time, For pissing in
take Kids hoof, and dry it, and beat it into powder, and give it bed.
to the patient to drink, either in beer or Ale four or five times
over.

For the rupture or bursennesse in men; take Comfrey and *Fer-* For the rup-
nesmus, and beat them together, and yellow wax, and ture.
Dears suet, untill it come unto a salve, and then apply it unto
the broken place, and it will knit it; also it shall be good for the
party to take Comphry roots, and rost them in hot embers, as
you rost wardens, and let the party eat them: for they are very
soveraign for the rupture; especially being eaten in a morning fa-
sting; and by all means let him wear a strong trusse till it be
whole.

Take Goats clawes and burn them in a new earthen pot to Additions to
powder, then put of the powder into broth or pottage, and eat it the diseases of
therein: or otherwise take Rue, Parsley, and Gromwell, and stamp the reins and
them together, and mixe it with wine and drink it. bladder.

Take *Agnus castus*, and *Castoreum*, and seeth them together in For him that
wine, and drink thereof; also seeth them in vinegar, and lap it hot cannot hold
about the privy parts, and it will help. his water.

Take Malmsey and butter, and warm it, and wash the reins of For the Go-
the back, whereupon you find pain, then take oyl of Mace, and norrea, or
anoint the back therewith. shedding of
seed.

First wash the reins of the back with warm white wine, then For weakness
annoint all the back with the ointment called *Perfluante* in the back.
to.

Take a leg of beef, a handful of Fennel roots, a handful of Parsly For heat in
roots, two roots of Comphry, one pound of Raisins of the Sun, a the reins.
pound of damask Prune, and a quarter of a pound of Dates, put all For comfor-
these together, and boyl them very soft, with six leav's of Neer, six ting and
leaves of Clary, twelve leaves of Bittany of the wood, and a little strengthening
Herts tongue: when they are sod very soft, take them into the of the back.
same broth again, with a quart of sack, and a penniworth of large
mace, and of this drink at your pleasure.

For the Hemeroides, which is a troublesome and sore grieve, For the he-
take of Dill, Dog-fennel, and Pellitory of Spain, of each halfe a meroids.
handfull, and beat it in a mortar with Sheeps suet and black
Sope, till it come to a salve, and then plaister-wise, apply it to
the

the fore, and it will give the grief ease.

For the piles
or hemeroids.

For the Piles or Hemeroides, take half a pint of ale, and a good quantity of Pepper, and as much Allom as a Walnut ; boyl all this together till it be as thick as birdlime, or thicker; this done, take the juyce of white Violets, and the juyce of Houfleeke, and when it is almost cold, put in the juyce, and strain them altogether, and with this ointment annoint the sore place twice a day. Otherwise for this grief, take Lead and grate it small, and lay it upon the sore : or else take muscles dryed and beat to powder, and lay it on the sores.

For the falling
of the fundamēt.

If a mans fundament fall down through some cold taken, or other cause, let it be forthwith put up again : then take the powder of *Town croffe* dried, and strew it gently upon the fundament, and anoint the reins of the back with honey, and then about it strew the powder of Cummin and Calasine mixt together, and ease will come thereby.

Additions to
the diseases of
the privy
parts.

For the hemeroids.

For the green
sicknesse.

Take a great handfull of Orpins, and bruise them between your hands, till it be like a salve, and then lay them upon a closth, and bind them fast to the Fundament.

To help the green sicknesse, take a pottle of white wine, and a handfull of Rosemary, a handfull of Wormwood, an ounce of Cardus Benedictus seed, and a dram of Cloves ; all these must be put into the white wine in a jug, and covered very close, and let it steep a day and a night before the party drink of it, then let her drink of it every morning, and two hours before supper : and so take it for a fortnight, and let her stir as much as she can, the more the better, and as early as she can. Otherwise for this sicknesse take Hyfop, Fennel, Pennyroyal, of these three, one good handfull, take two ounces of Currants, seeth these in a pint of fait water, to a half, then strain the herbs from the liquor, and put thereto two ounces of fine sugar, and two spoonfulls of white wine vinegar, let the party drink every morning four spoonfulls thereof, and walk upon it.

To increase
womans milk.

To increase womans milk, you shall boyl in strong posset ale, good store of Coleworts, and cause her to drink every meal of the same: also, if she use to eat boiled Coleworts with her meat, it will wonderfully increase her milk.

To dry up womans milk, take red sage, and having stamp

it, and strained the iuyce from the same, adde thereunto as much wine vinegar, and stir them well together, then warm it on a milk flat dish, over a few coals, steep therein a sheet of brown paper, then making a hole in the midst thereof for the nipple of the brest to go through, cover all the brest over with the paper, and remove it as occasion shall serve, but be very careful it be laid very hot to. Some are of opinion, that for a woman to milk her breasts upon the earth, will cause her to dry: but I refer it to triall.

To help womens sore breasts, when they are swelled, or else inflamed, take Violet leaves, and cut them small, and seeth them in milk or running water with wheat bran, or wheat bread in crammes, then lay it to the sore, as hot as the party can endure it.

If a woman have a strong and hard labour, take four spoonfulls of another womans milk, and give it the woman to drink in her labour, and she shall be delivered presently.

If a woman by mischance have her child dead within her, she shall take *Distander*, *Felwort*, *Penroyall*, and stamp them, and take of each a spoonfull of the iuyce, and mix it with old wine, and give her to drink, and she shall soon be delivered without danger.

To make a woman to conceive, let her either drink *Mugwort* steeped in wine: or else the powder thereof mixed with wine, as she shall best please her taste.

Take the powder of *Corall* finely ground, and eat it in a rear egg, and it will stay the flux.

Against womens terms, make a pessary of the juice of *Mugwort*, or the water that it is sodden in, and apply it, but if it be for the flux of the flowres, take the juice of *Plaintain*, and drink it in red wine.

Take a Fomentation made of the water wherein the leaves and flowers of *Tutsan* is sodden, to drink up the superfluities of the matrix, it cleanseth the entrance; but this herb would be gathered in harvest; if the woman have pain in the matrix, set on the fire water that *Amomum* hath been sodden in, and of the decoction make a pessary, and it will give ease.

Take

A generall
purge for a
woman in
child bed.

Take two or three eggs, and they must be neither rest nor raw, but between both, and then take butter that Salt never came in, and put into the eggs, and sup them off, and eat a piece of brown bread to them, and drink a draught of small Ale.

To deliver
the dead birth
To increase
milk.

Take the root of *Aristolochia rotunda*, and boyl it in wine and oil, make a fomentation thereof, and it helps.

Take the buds and tender crops of Briony, and boyl them in broath or pottage, and let the woman eat thereof, it is soveraign.

For a woman
that is new
brought in
bed, and
swooneth
much.

Take Mugwort, Motherwort, and Mints, the quantity of a handfull in all, seeth them together in a pint of Malmsey, and give her to drink thereof two or three spoonfulls at a time, and it will appease her swooning.

To provoke
sleep.
For sore breasts

Take Henbane stamped and mixt with vinegar, and apply it playster wise over all the forehead, and it will cause sleep.

Take Sage, Smallage, Mallows, and Plantain, of each an handfull, beat them all well in a mortar, then put unto them oatmeal and milk, and spread it on a fine linnen cloath, an inch thick, and lay it to the brest or breasts: or otherwise, take white bread leaven, and strain it with cream, and put thereto two or three yolks of eggs, sallet oyl, or oyl of Roses, and put it upon a soft fire till it be warme, and so apply it to the brest.

For morphew
of both kinds.

For Morphew, whether it be white or black, take of the Li-charge of gold, a dram, of unwrought brimstone two drams, beat them into fine powder, then take of the oyl of Roses and Swine grease, of each a like quantity, and grind them altogether with halfe a dram of Champhire, and a little vinegar, and anoint the same therewith morning and evening.

To breed hair

To breed hair, take Southernwood, and burn it to ashes, and mixe it with common oyl, then annoint the bald place therewith morning and evening, and it will breed hair exceedingly.

For the gout.

For the Gout, take *Aristolochia rotunda*, *Althea*, Bettony, and the roots of wild Neep, and the roots of the wild Dock cut in pieces after the upper rind is taken away, of each a like quantity, boyl them all in running water till they be soft and thick: then stamp them in a mortar, as small as may be, and

put thereto a litle quantity of chimney soot, and a pint of new milk of a Cow, which is all of one intire colour, and as much of the urine of a man that is fasting, and having stirred them all well together, boile them once again on the fire, then as hot as the party can suffer it, apply it to the grieved place, and it will give him ease.

For the Sciatica, take of mustard seed a good handfull, and as much of white hony, and as much weight of figs, and crummes of white bread half so much, then with strong vinegar beat it in a mortar till it come unto a salve; then apply it unto the grieved place, and it will give the grieved party ease: so will also a plaister of Omicrotium, if it be continually warm upon the same.

To help all manner of swelling or aches in what part of the body soever it be, or stinging of any venomous beast, as Adder, Snake, or such like, take Hore-hound, Smallage, Porrett, small Mal-lows, and wild Tansey, of each a like quantity, and bruise them, or cut them small: then seeth them altogether in a pan, with milk, Oatmeal, and as much sheeps suet, or Dears suet, as a Hens egge, and let it boyl till it be a thick plaister, then lay it upon a blew woollen cloth, and lay it to the grieve, as hot as one can suffer it.

For any swelling in the leggs or feet, take a good handfull of water Cresses, and shread them small, and put them in an earthen pot: and put thereto thick Wine lees, and wheat bran, and Sheeps suet, of each of them a like quantity, and let them boyl together untill they be thick; then take a linnen cloth, and bind it about the fore and swelling, as hot as the party grieved can indure it, and let it remain on a whole night and a day without any removing, and when you take it away, lay to it a fresh plaister hot, as before, & it will take away both the pain and the swelling. Other Chirurgions for this grief, take hony and beer, and beat them together, and therewith bathe the swelling morning and evening.

To wash any sore or Ulcer, take running water, and Bolearmio-nick and Camphire, and boile them together, and dip in a cloth, and lay it to the sore, as hot as may be endured; also Plantain water is good to kill the heat of any sore: or if you take Woodbine leaves, and bruise them small, it will heal a sore; or if you wash

wash a sore with verjuice, that hath been burne or scalded, it is a present remedy.

A pultis for a
sore. There be divers others, which for this griefe take the green of Goose dung, and boyl it in fresh butter, then strain it very cleane and use it. And Sallet oyl, and Snow water beaten together, will cure any scald or burning.

For any old
sore. To cure any old sore how grievous soever it be, take of new milk three quarts, and a good handful of Plantain, and let it boyl till a pint be consumed; then add three ounces of Allom made in powder, and an ounce and a half of white Sugar candy powdered. Also then let it boyl a little till it have a curd; then strain it; with this warm, wash the Ulcer, and all the members about it: then dry it, and lay upon the Ulcer *Unguentum Basilicon*, spread on linc, and your *diminium* playster over it, for this strengtheth and killeth the itch; but if you find this is not sharp enough, then take of milk a quart, Allom in powder two ounces, vinegar a spoonfull; when the milk doth seeth, put in the Allom and Vinegar, then take off the curd, and use the rest as was before said, and it will cure it.

For any scabs
or itch. For scabs or itch, take *Unguentum Populion*, and therewith anoint the party, and it will help; but if it be more strong and rank, take an ounce of Nerve oyl and three pennyworth of quicksilver, and beat and work them together, until you see that assuredly the quicksilver is killed; then lee the party anoint therewith the palms of his hands, the boughs at his elbowes, his arm-pits, and hams, and it will cure all his body.

For the lepro-
sie. To cure the leprosie take the juyce of Colworts, and mixe it with Allom and strong Ale. and annoint the Leper therewith morning and evening, and it will cleanse him wonderfully, especially if he be purged first, and have some part of his corrupt blood taken away.

To take away
pimples. To take away either pimples from the face, or any other part of the body, take virgin wax, and *Sperma cati*, of each alike quantity, and boyl them together, and dip in a fine linnen cloth, and as it cools, dip it well of both sides, then lay upon it another fair cloath upon a table, and then fold up a cloath in your hands, and all to slight it with the cloath, then take as much as will cover the grieved place.

If any man have his privy parts burnt, take the the ashes of a ^{Privy parts} linnen cloth in good quantity, and put it into the former burnt. oyl of eggs, and anoint the fore member therewith, and it will cure it.

For any burning, take six new laid eggs and roast them very hard, and take out the yolks thereof and put them into an earthen pot, and set it over the fire on hot embers, and then whilst the eggs look black, stir them with a slice untill they come to an oyl, which oyl take, clarify, and put it into a glasse by it selfe, and therewith anoint the burning and it will cure it.

For any scalding with hot water, oyl, or otherwise, take good cream, and set it on the fire, and put into it the green which grows on a stone wall; take also Yarrow, the green of Elder bark and fire grasse, and chop them small, then put them into the cream, and stir it well till it come to an oyl salve, then strain it, and anoint the fore with it.

To dry up any fore, take Smallage, Groundfil, wild Mallows, and Violet leaves; chop them small, and boyl them in milk with bruised Oatmeal and Sheeps suet, and so apply it to the fore.

To eat away dead flesh, take Stubblewort, and sold it up in a red dock leaf, or red wort leaf, and so rost it in the hot embers, and so lay it to the fore, and it will fret away all the dead flesh; or otherwise, if you strew upon the fore a little Precipitate, it will eat away dead flesh.

To make a water to heal all manner of wounds, you shall take lupin flowers, leaves and roots, and in March or April, when the flowers are at the best, distil it; then with that water, bathe the wound, and lay a linnen cloath well therewith in the wound, and it will heal it.

To heal any wound or cut in any flesh or part of the body, first, if it be fit to be stitch'd, stitch it up, and then take *Unguentum*, and lay it upon a pleagant of lint as big as the wound, and then over it a *diminuum* plaister made of Sallet oyl and red lead, and so dresse it at least once in four and twenty hours: but if it be a hollow wound, as some thrust in the body, or other members, then you shall take *Balsamum cephalicum* and warming it on a chafing dish of coals, dip the tent therein,

and so put it into the wound, then lay your plaister of Diminium over it, and do thus at least once a day until it be whole.

For sinews cut
or shunk.

If a mans sinews be cut or shrunk, he shall go to the root of the wild Neep, which is like woodhine, and make a hole in the midst of the root, then cover it well again that no air go out nor in, nor other moisture; thus let it abide a day and a night, then go and open it, and you shall find therein a certain liquor, then take out the liquor and put it into a clean glasse, and do thus every day whilst you find any moisture in the hole; and this most onely be done in the months of *April* and *May*: then annoint the fore therewith against the fire, then wet a linnen cloath in the same liquor, and lap it about the fore, and the vertue will soon be perceived.

To break any
impostume.

To break any impostume, and to ripen it, only take the green Melilot plaister, and lay it thereunto; and it is sufficient.

To generall
infirmities of
Surgery, and
first of burn-
ings and
scaldings.
For burning
or scalding,
with either
Liquor or
Gunpowder.

Take Plantain water, or Sallet oyl, and running water beaten together, and therewith anoint the fore with a feather, till the fire be taken out, then take the white of eggs, and beat them to oyl; which done, take a hare skinn and clip the hair into the oyl, and make it as thick as you may spread it upon a fine linnen cloath, and so lay it upon the fore, and remove it not, until it be whole, and if any rise up of it selfe, clip it away with your shears, and if it be not perfectly whole, then take a little of the oyntment, and lay it unto the same place again: otherwise take half a bushel of Glovers threads of all sorts, and so much of running water, as shall be thought convenient to seeth them, and put thereto a quarter of a pound of Burrowes grease, and then take halfe a bushel of the down of Cats tails; and boyl them altogether, continually stirring them, untill they be sodden, that they may be strained into an earthen pot or glasse, and with it anoint the fore.

For burnings
or scaldings
on the face.

Or else take Caprifolium, Moufe-ear, ground Ivy, and Hangedung, the reddest or the yellowest, and fry them with *May* butter altogether, untill it be brown, then strain it through a clean cloath, and anoint the fore therewith.

Take the middle rind of the Elm tree, and lay it two or three
hours

hours in fair running water, till it wax ropy like glew, and then anoint the sore therewith : Or otherwise, take sheeps tallow, and sheeps dung, and mixe them together till they come to a salve, and then apply it to the sore

Take Plantain leaves, Daisie leaves, the green bark of Elders, An ointment for burning. and greene Germanders, stamp them altogether with fresh butter, or with oyl, and strain it through a linnen cloath, and with a feather anoint the sore till it be whole.

Take of the oyl Olive a pint, Turpentine a pound unwrought, Wax half a pound, Rosen a quarter of a pound, Sheeps suet two pound; then take of Orpents, Smallage, Ragwort, Plantain, and ticklewort, of each a good handful, chop all these herbs very small, and boyl them in a pan altogether upon a soaking fire, and stir them exceeding much, until they be well incorporated together; then take it from the fire, and strain all through a strong canvass cloath into clean pots, or glasses, and use it as your occasion shall serve, either to anoint, teint, or plaister.

Or otherwise, take Popler buds, and Elder buds, stamp and strain them, then put thereto a little Venice Turpentine, Wax, and Rosin, and so boyl them together, and therewith dresse the sore. Ulcers and sores. A salve for any old sore. Or else take two handfuls of Plantain leaves bray them small, and strain out the juice, then put to it as much womans milk a spoonful of Hony, a yolke of an Egg, and as much wheat flower as you think will bring it to a salve : then make a plaister thereof, and lay it unto the sore, renewing it once in four and twenty hours.

Take an ounce of *Unguentum Apostolorum*, and an ounce of *Unguentum Erythracum*, and put them together in a pot, being first well wrought together in a bladder; and if the flesh be weak, put into it a little fine white sugar, and therewith dresse the sore; or otherwise, take only Precipitate in fine powder, and strew it on the sore. To take away dead flesh.

Take a gallon of Smiths flak water, two handfuls of Sage, A water for a white Copperas; a quart of Ale; two ounces of Allome, and a little for a white Copperas; seeth them altogether till half be consumed, then strain it, and put it into a clean vessel, and therewith wash the fore

fore. Oild *Castoreum* in running water, and put therein Redd *Allom*, and *Castoreum* till the *Allom* and the *Castoreum* be dissolved, then strain the clearer of the water, and thinewith it with the fire.

Or else take Sage, Fenell, Cinquefoil, of each a good handful, boyl them in a gallon of running water till they be tender, then strain the liquor from the herbs and put it to a quarter of a pound of Redd *Allom*, and let it sceth again a little, till the *Allom* be melted, then take it from the fire, and use it thus: dip lin in it warm, and lay it to the sore; and if it be hollow, apply more lint, then take a little bolster of linnen cloath, and wet it well in the water, then wring out the water, and so bind on the bolster close.

A black plaister
to heal old
sores, and kill
inflammations

Take a pint of faller oyl, and put into it six ounces of red lead, and a little ceruffe or white lead, then set it over a gentle fire, and let it boyl a long season, stirring it well till it be stiff; which you shall try in this order; let it drop from your stick or slice, upon the bottom of a saucer, and so stand untill it be cold, and then if it be well boyled, it will be stiff and very black, then take it off and let it stand a little, and after strain it through a cloath into a basin, but first annoint the basin with faller oyl, and also your fingers, and so make it up into rouls plaisterwise, and spread it, and apply it as occasion shall serve.

An oymntment
to ripen sores.

Take Mallows and Beets, and sceth them in water, then dry away the water from them, and beat the herbs well with old Beares greafe, and so apply it unto the apostume, hot.

For the sting-
ing by any ve-
nomous thing
For a venom.

Take a handfal of Rue, and stamp it with rusty bacon till it come to a perfect salve, and therewith dresse the sore till it be whole.

For a ring-
worm.

If the party be outwardly venom'd take Sage, and bruise it well, and apply it unto the sore, removing it at least twice a day; but if he be inwardly, then let the party drinke the juyce of Sage, either in Wine or Ale morning and evening.

Take Cellanline early in the morning and bruise it well, and then apply it to the sore and renew it twice or thrice a day.

Take of Camphier one dram, of Quicksilver four pennyworth,
Milk

killed well with Vinegar, then mix it with two penny worth of *Oyl of Rose*, and therewith annoint the body. Or other wise, take red Onions, and seeth them in running water a good while; then bruise the Onions small, and with the water they were sodden in, strain them in, and then wash the infected place with the same.

Take a great quantity of the herb Bennet, and as much of red Nettles, pound them well, and strain them, and with the juice wash the Patient naked before the fire, and so let it drink in, and wash him again, and do so divers dayes till he be whole.

Take a penny worth of white Copperas, and as much green Copperas, a quarter of an ounce of white Mercury, a half pennyworth of Allom, and burn it, and set all over the fire, with a pint of fair water, and a quarter of a pint of wine Vinegar, boyl all these together till they come to half a pint, and then annoint the sore therewith.

Take Barrowes grease a pretty quantity, and take an apple and pare it, and take the coar shell an out, then chop your apple and your Barrowes grease together, and set it over the fire that it may melt, but not boyl; then take it from the fire, and put thereto a pretty quantity of rose water, and stir all together till it be cold, and keepe it in a cleane vessel, and then annoint the face wherewith.

Take Quick silver, and kill it with fasting spiritale: then take Verdigrease, Arabick, Turpentine, Oyl of Olive, and Popalium, and mix them together to enquire ointment, and annoint the sores therewith and keepe the party exceeding warme. Or other wise, take of Allom burned, of Rooin, Frankincense, Popalium, Oyl of Rose, Oyl of Olive, green Copperas, Verdigrease, White Lead, Mercury sublimed, of each a pretty quantity, but of Allom most; then beat to powder the simples that are hard, and mix your oyle, and cast in your powder, and stir all well together; then strain them through a cloth, and apply it warme to the foresore, take of Capon grease that hath toucht no water, the juice of Rye, and the fine powder of Pepper, and mix them together to an ointment, and apply it round about the sores, but let it not come into the sores; altho it will dry them up.

To put out
the French or
Spanish pox

Take of Treacle half a penny worth, of long Pepper as much, and of Grains as much, a little Ginger, and a little quantity of Licorish, wash them with strong Ale, and let the party drink in it, and lie down in his bed, and take a good sweat; and then when the sores arise, use some of the ointment before related.

To make the
scabs of the
French pox
to fall away.

Take the juyce of red Fennel, and the juyce of Seagreen, and mix them very well together till it be thick, and rub it about the party; but before you do annoy them, you shall wash them with water. Take Sage, and seeth it in very fair water, from a gallon to a pottle, and put therein a quantity of hony, and some allay, and let them boyl a little together; when you have strained the herbs from the water; then put in your hony and your allay, and therewith wash the pox first, and let it dry in well, and then lay on the aforesaid ointment.

Additions to
green wounds

Take the oyle of the white of an egg, wheat flower, a little hony, and Venice Turpentine, take and stirre all these together, and so use it about the wound, but not within; and if the wound do bleed, then add to this salve, a little quantity of Bolearmoniack.

A defensive
for a green
wound.

Take *Opeposax* and *Galbanum*, of each an ounce, *Ammianum*, and Bedlinde, of each two ounces, of Lethargy of gold one pound and an half, new wax half a pound, *Lapis Calaminaris*, one ounce, Turpentine four ounces, Myrrhe two ounces, oyl of bay one ounce, Thurst one ounce, *Astolochia* roots two ounces, oyl of Roses two ounces, salter oyl two pound. All the hard Simples must be beaten to fine powder, and searfed; take also three pints of right Wine vinegar, and put your four gums into the vinegar, a whole day before, till the gums be dissolved, then set it over the fire, and let it boyl very softly, untill your vinegar be as good as boiled away; then take an earthen pot with a wide mouth, and put your oyl in, and your wax, but your wax must be scraped before you put it in; then by a little at once put in your Lethargy, and stir it exceedingly, then put in all your gums, and all the rest but let your Turpentine be last, and so let it boyl till you see it grow to be thick; then pour it into a basin of water, and work it with oyl of Roses for sticking unto your hands, and make it up in rouls plaister-wise, and here is to be noted, that your oyl of Roses must

not.

not be boyled with the rest, but after it is taken from the fire, a little before the Turpentine.

Take three good handfuls of Sage, and as much of Honisuckle A water to
leaves, and the flowers clean picked; then take one pound of Rosh beal any
Allom, and a quarter of a pound of right English honey clarified, wounds, or
half a pennyworth of grains, and two gallons of running water; large,
then put all the said things into the water, and let them seeth
till halfe be consumed; then take it from the fire till it be almost
cold, and strain it through a clean cloath, and put it up in a
glasses; and then either on rent or pleagant, use it as you have oc-
casion.

Take a quart of Ric flower, and temper it with running water, and
make dough thereof, then according to the bigness of the wound
wound, lay it within the defensive plaist, to be renewed, as often as
over it, and every dressing make it lesse and lesse untill the wound be
closed.

Take a quart of Neats foot oyle, a quart of Olive oyle, and a quart of Aquavice
a quart of Rose water, a handfull of it, and boyl all these together till halfe be consumed.
then prove and strain it, and use it according as you find occasion.

Take Honey, Pitch, and Butter, and mix them together, and use a wound
anoint the hurt against the fire, and tent the sore with them till the
same.

Take groundfil and stamp it, and seeth it with sweet milk
till it be thick, then temper it with black sope, and lay it to the
fore.

Take Rosin, a quarter of a pound, of wax three ounces, of oyle
of Roses one ounce and a half, seeth them all together in a pipe
of white wine till it come to skinning; then take it from the
fire and put thereto two ounces of Venice Turpentine, and apply
it to the wound or sore.

Take Mustard made with strong Vinegar, the crums of brown
bread, with a quantity of honey and linseed oyle, temper all toge-
ther well and lay it upon a cloath plaister with; put a thin cloath
between the plaister and the flesh, and lay it to the place grieved, as
circumstances requires.

Take a pound of fine Rosin, of oyle de bay two ounces, of
Frankincense half a pound, of Oyle of Spike
two

A yellow scar-
cloth for any
pain or swell-
ling.

two ounces of oyle of a Turke two ounces of oyle of Roses two ounces of Wax halfa pound, of Turpentine a quarter of a pound, melt them and stir them well together, and then dip linnen clothe therein, and apply the Scar-cloth as you shall have occasion: and note, the more oyle you use, the more supple the Scar-cloth is, and the less oyle, the stiffer it will be.

For bruises
swelled,

Take a little black soap-stick and honey, and beat them well together, and spread it upon a brown paper, and apply it to the bruise.

For swelled
legs,

Take Mallows and seeth them in the drage of good Ale or Milk, and make a plaster thereof, and apply it to the place swelled.

For any ache,

Take in the month of May, Henbane, and bruise it well, and put it into an earthen pot, and put thereto a pint of Sallet oyle, and set it in the Sun till it be all one substance, then anoint the ache therewith.

 A plaster for
any pain in
the joints.

Take halfa pound of unwrought waxe, as much Resin, one ounce of *Gamboge*, a quarter of a pound of Lethargy of gold, three quarters of white lead, beaten to powder and searst, then take a pint of Natts foot oyle, and set it on the fire in a small vessel which may contain the rest, and when it is all melted, then put in the powders, and stir it first with a stick, and try it upon the bottom of a saucer, when it beginneth to become hard; then take it from the fire, and anoint a fir board with Natts-foot oyle, and as you may handle it for here, work it up in roule, and it will keep five or six years, being wrapped up close in paper, and when you will use it, spread of it thin upon new Lockram or Leather, somewhat bigger than the griefe, and so if the griefe remove, follow it renewing it morning and evening, and let it be somewhat warm when it is laid on, and beware of taking cold, and drinking hot wines.

For bones cut
or joint, or
new, being
sprained,

Take four or five yolks of eggs hard foddren or roasted, and take the branches of great Morrell, and the barries in Summer, and in the winter the roots, and bray all well together in a mortar with sheeps milke, and then drie it untill it be very thick, and so make a playster thereof, and lay it about the

fore, and it will take away both pain and swelling.

Take a gillion of stinging Lye, put to it of Plantain and A bathe for
Knot grass, of each two handful, of Wormwood and Comfrey, broken joints.
of each a full handful, and boyle all these together in the lye a good
while, and when it is luke warm, bath the broken member there-
with, and take the bark of the Elder gathered in March, and
strip it of wood, and a little boyl them in water, then let
them be dried, and a very little fine vinegar a good quantity at
a time, in the morning, eve before meat, or an houre before
the Patient go to dinner, and it much avails to the knitting of
bones.

Take R. Cameray, Featherfew, Origina, Pellitory of the wall,
Fennel, Mallowes, Violet leaves, and Nettles, boyl and straine
generally, and when it is well scolded, put in it two or three
loas of milk, then let the patty stand or sit in it an houre
or two, the bath reaching up to the stomach, and when they come
out, they must go to bed and sweat, and beware taking of
cold.

Make a playster of wheat flower, and the whites of eggs, A Gwerigne
and spread it on a double linnen cloth, and lay the playster help for
on an even board, and lay the broken Part thereon, and setken bones.
it even according to nature, and lay the playster about it
and splint it, and give him to drink, Kneewort, the juice there-
of, twice and no more, for the third time it will unknit, but
give him to drink nine dayes, each day the juice of Comfrey,
Drises, and Osmund, in stale Ale, and it shall knit, and let
the foresaid playster lye to, ten dayes at the least, and when
you take it away do this, take Harbord, red Fennell,
Handsomie Walwort, and Pellitory, and crush them, then un-
loose the member, and take away the splints, and then bath the
limb, and the playster about the member in this bathe, till it
have soakt so long, that it come gently away of it selfe, then
take the foresaid playster, and lay thereto five or six dayes
very hot, and let each playster lye to for a continuance, and al-
wayes splint it well, and after cleane it with the oymment
before rehearsed for broken bones, and keep the patty from
unwholesome meats and drinks till he be whole, and if the
limb be on his arme, let him bear a ball of green herbs
in

in his hand to prevent the shrinking of the hand, and sinews.
 For any fever. Take Sage Ragwort, Yarrow, unlet Leeks, of each a like quantity, stamp them with Bay salt, and apply them to the wrists of the hands.

To expel heat in a fever. Blanch Almonds in the cold water, and make milk of them (but it must not seeth) then put to it Sugar, and in the extremity of heat, see that you drink thereof.

The royal medicine for fevers. Take three spoonfuls of Ale, and a little Saffron, and bruise and strain it thereto, then add a quarter of a spoonful of fine Treacle, and mix altogether, and drink it when the fit comes.

Another. Take two roots of Crowfoot that growes in a marsh ground, which have no little roots about them, to the number of twenty or more, and a little of the earth, that is about them, and do not wash them, and add a little quantity of Salt, and mix it well together, and lay it on linnen cloaths, and bind it about your thumbs, betwixt the fist and the neather joint, and let it lie nine dayes unremoved, and it will expel the Fever.

*An approved Medicine for the greatest Lask
or Fluxe.*

Take a right Pomwater, the greatest you can get, or else two little ones, roast them very tender to pap, then take away the skinn and the core, and use only the pap, and the like quantity of Chalk finely scraped, mix them both together upon a trencher before the fire, and work them well to a plaister; then spread it upon a linnen cloath warmed very hot as may be suffered, and so bind it unto the navil for twenty four hours, use this medicine twice or thrice, or more, untill the Lask be staid.

Of Oyle of Swallowes.

To make the Oyle of Swallowes, take Lavender-cotten, Spike-Knot grass, Rob row, Balm, Valerian, Rosemary tops, Woodbine tops, Violett flings, French mallowes, the tops of Alecock,
 Straw

Strawberry strings, Tutlan, Plantain Walnut tree leaves, the tops of young Beets, Ispop, Violet leaves, Sage of vertue, fine Roman Wormwood, of each of them a handful, Camomile, and red Roses, of each two handful, twenty quick Swallows, and beat them altogether in a mortar, and put to them a quart of Neats foot oyl, or May butter, and grind them all well together with two ounces of Cloves well beaten; then put them altogether in an earthen pot, and stop it very close, that no air come into it, and set it nine dayes in a cellar, or cold place, then open your pot, and put into it half a pound of white or yellow wax, cut very small, and a pint of oyl or butter; then set your pot close stopped into a pan of water, and let it boyl six or eight hours, and then strain it; this oyl is exceeding soveraign for any broken bones, bones out of joint, or any pain or grief either in the bones or sinewes.

To make oyle of Camomile, take a quart of fallet Oyle and put it into a glasse, then take a handful of Camomile, and bruise it, and put into the oyl, and let them stand in the same, twelve dayes; only thou must shift it every three dayes, that is, to strain it from the old Camomile, and put in as much of new, and that oil is very soveraign for any grief, proceeding from old causes.

To make oyle of Lavender, take a pint of fallet Oyle, and put it into a glasse, then put to it a handful of Lavender, and let it stand in the same twelve dayes, and use it in all respects, as you did your oyle of Camomile.

To make an Oyle which shall make the skin of the hands very smooth, take Almonds, and beat them to oyle, then take whole Cloves, and put them both together into a glasse, and set it in the sun five or six dayes, then strain it, and with the same anoint your hands every night when you go to bed, or otherwise as you have convenient leisure.

To make that soveraign water, which was first invented by Dr Stephens, in the same form as he delivered the Receipt to the Arch-bishop of Canterbury, a little before the death of the said Doctor. Take a gallon of good Gascoyn wine, then take Ginger, Galingale, Cinamon, Nutmegs, Graines, Cloves bruised, Fennel-seeds, Carraway-seeds, Origanum, of:

of every of them a like quantity, that is to say, a dram, then take sage, wild marjoram, peny royall, mint, red roses, time, pellitory, rosemary, wild time, camomile, lavender, of each of them a handful; then bray the spices small, and bruise the herbs, and put all into the wine, and let it stand so twelve hours, only stirre it divers times; then distill it by a Lymbbeck, and keep the first water by it selfe, for that is the best. then keep the second water, for that is good, and for the last, neglect it not, for it is very wholesome, though the worst of the three. Now for the vertue of this water, it is this: it comforteth the spirits and vitall parts, and helpeth all inward diseases that commeth of cold; it is good against the shaking of the pallsie, and cureth the contraction of the sinews, and helpeth the conception of women that be barren, it killeth the wormes in the body, it cureth the cold cough, it helpeth the tooth-ach, it comforteth the stomack, and cureth the old dropsie, it helpeth the stone in the bladder, and in the reins, it helpeth a stinking breath: and whosoever useth this water moderately, and not too often, it preserveth him in good liking, and will make him seem young in old age. With this water Doctor Stevens preserved his own life, untill such extreame age, that he could neither go nor ride, and he continued his life, being bed-rid five years, when other Physicians did judge he could not live one year, when he did confesse a little before his death, saying, That if he were sick at any time, he never used any thing but this water only: and also the Arch-bishop of *Canterbury* used it, and found such goodnesse in it, that he lived till he was not able to drink out of a cup, but sucked his drink through a hollow pipe of silver.

This water will be much the better if it be set in the Sun.

A restorative
of Rosafolis.

To make a cordial Rosafolis, take Rosafolis, and in any wise, touch not the leaves thereof in the gathering, nor wash it; take thereof four good handfuls, then take two good pints of Aquavitzæ, and put them both in a glasse, or pewter pot of three or four pints, and then stop the same hard and just, and so let it stand three dayes and three nights, and the third
day

day, strain it through a clean cloath into another glasse, or pewter pot, and put thereto halfe a pound of Sugar beaten small, four ounces of fine Lycoras beaten into powder, halfe a pound of sound Dates, the stones being taken out, and cut them and make them clean, and then mince them small, and mixe all these together, and stop the glasse or pot close and just, and after distill it through a Lymbeck, then drink of it at night to bedward, halfe a spoonful with Ale or Beer, but Ale is the better. as much in the morning fasting, for there is not the weakest body in the world that wanteth nature or strength. or that is in a consumption, but it will restore him again, and cause him to be strong and lusty, and to have a marvellous hungry stomack, provided alwayes that this Rosafolies be gathered (if possible) at the full of the Moon, when the Sun shineth before noon, and let the roots of them be cut away.

Take the flowers of Roses or Violets, and break them small, and put them into Sallet Oyle, and let them stand in the same ten or twelve dayes, and then presse it. Or otherwise take a quart of Oyle Olive, and put thereto six spoonfuls of cleane water, and stirre it well with a slice, till it waxe as white as milk; then take two pound of red Rose leaves, and cut the white of the ends of the leaves away, and put the Roses into the Oyle, and then put it into a double glasse, and set it in the Sun all the Summer time, and it is soveraign for any scalding or burning with water or oyle.

Additions to the Oyls.
To make oyle of Roses or Violets.

Or else take red Roses new plucked, a pound or two, and cut the white ends of the leaves away, then take May butter and melt it over the fire with two pound of Oyle Olive, and when it is clarified, put in your Roses, and put it all in a vessel of glasse, or of earth, and stop it well about, that no air enter in or out, and set it in another vessel with water, and let it boyl half a day or more, and then take it forth and strain or presse it through a cloath, and put it into glasse bottles: this is good for all manner of unkind heats.

Take two or three pound of Nutmegs, and cut them small, and bruiſe them well, then put them into a pan, and beat them, and stir them about, which done, put them into
cannase

To make Oyl of Nutmegs.

canvasse or strong linnen bag, and close them in a presse, and presse them, and get out all the liquor of them, which will be like *ma-na*; then serape it from the canvasse bag, as much as you can with a knife; then put it into some vessel or glasse, and stop it well, but set it not in the Sun, for it will wax clean of it self, within 10 or 15 dayes, and it is worth thrice so much as the Nutmegs themselves, and the oyl hath very great vertue in comforting stomack, and inward parts, and asswaging the pain of the Mother, and Sciatica.

To make perfect oyle of Spike.

Take the flowres of Spike, and wash them only in oyle Olive, and then stamp them well, then put them in a canvas bag, and presse them in a presse as hard as you can, and take that which commeth out, carefully, and put it into a strong vessel of glasse, and set it not in the Sun, for it will clear of it selfe, and wax fair and bright, and will have a very sharp odour of the Spike; and thus you may make oyl of other herbs of like nature, as Lavender, Camomile, and such like.

To make oile of Mastick.

Take an ounce of Mastick, and an ounce of Olibanum pounded as small as is possible, and boyl them in oyl Olive (a quart to a third part;) then presse it, and put it into a glasse, and after ten or twelve dayes it will be perfect: it is exceeding good for any cold grief.

Thus having in a summary manner, passed over all the most Physicall and Chyrurgical notes, which burthen the mind of our *English House-wife*, being as much as is needfull, for the preservation of the health of her family; and having in this Chapter, shewed all the inward vertues wherewith she should be adorned: I will now return unto her more outward and active knowledge, wherein albeit the mind be as much occupied as before, yet is the body a great deal more in use: neither can the work be well effected by rule or direction.



The English House-wifes Skill in Cookery.

C H A P. I.

*Of the outward and active Knowledge of the House-wife, and of
her Skill in Cookery, as Sautes of all sorts, with Fricas, Cakes,
Sauces, Pasties, Biscuits, &c. and of dressing of
great Feasts.*

TO speak then of the outward and active Knowledges which belong unto an English House-wife, I hold the first and most principall to be, a perfect skill and Knowledge in Cookery, together with all the secrets belonging to the same: because it is a duty really belonging to woman: and she that is utterly ignorant therein, may not by Laws of strict Justice, challenge the freedom of Marriage, because indeed she can then but perform half her vow: for she may love and obey, but she cannot cherish, serve, and keep him with that true duty which is ever expected.

To proceed then to this Knowledge of Cookery, you shall understand that the first step thereunto is, to have knowledge of all sorts of herbs belonging unto the Kitchen; whether they be for the Pot, for Sallets, for Sauces, for seivings, or for any other seasoning or adorning; which skill of Knowledge of the herbs, she must get by her own true labour and experience and not by my relation, which would be much too tedious; and for the use of them, She shall see it in the composition of dishes and meat hereafter following. She shall also know the time of the year, month, and Moon, in which all Herbs are to be sown; and when they are in their best flourishing

She must
know all herbs

rishing, that gathering all herbs in their height of goodnesse, she may have the prime use of the same. And because I will inable and not burden her memory, I will here give her a short Epitomy of all that Knowledge.

Her skill in
the Garden.

First then, let our English Housewife know, that she may then at all times of the month and moon generally sow Asparagus, Coleworts, Spinage, Lettice, Parsnips, Raddish, and Chives.

In *February*, in the New of the Moon, she may sow Spike, Garlick, Borage, Buglose, Chervile, Coriander, Gourds, Cresses, Marjoram, Palma Christi, Flowre gentle, white Poppy, Purslain, Radish, Rucker, Rosemary, Sorrel, double Marygolds and Time. The Moon full she may sow Anniseed, Musk'd violets, Beets, Skirrits, white Succory, Fennel, and Parsley. The Moon old, sow Holy thistle, cole Cabadge, white cole, green cole, Cucumbers, Hartshorn, Dyers grain, Cabadge, Lettice, Mellions, Onions, Parsnips, Larks heel, Burnet, and Leeks.

In *March*, the Moon new sow Garlick, Borrage, Buglose, Chervile, Coriander, Gourds, Marjoram, white Poppy, Purslain, Radish, Sorrel, double Marigolds, Time, Violets. At the full Moon, Anniseed, Beets, Skirrits, Succory; Fennel, Apples of Love, and Marvellous Apples. At the wain, Hartichokes, Basill, Blessed thistle, cole Cabbage, white Cole, green cole. Citrons, Cucumbers, Hartshorn, Samphire, Spinage, Gilly flowers, Isop, Cabadge, Lettice, Mellons, Mugrets, Onions, Flower Gentil, Burnet, Leeks, and Savory. In *May*, the Moon old, sow blessed thistle. In *June*, the Moon new, sow Gourds and Radishes. The moon old, sow Cucumbers, Mellons, Parsnips. In *July*, the Moon at full, sow white Succory; and the moon old, sow Cabadge Lettice. Lastly, in *August*, the Moon at the full, sow white Succory.

Transplant-
ing of herbs.

Also she must know that Herbs growing of Seeds may be transplanted at all times, except Chervile, Arage, Spinage, and Parsley, which are not good being once transplanted: observing ever to transplant them in moist and rainy weather.

Choice of
seedes.

Also she must know that the choice of seeds are two fold of which some grow best being new, and Cucumbers and Leeks,
and

and some being old, as Coriander, Parsley, Beets, Origan, Savory, Cresset, Spinage, and Poppy : you must keep cold Lettices, Hartichokes, Basil, Holy thistle, Cabage, Cole, Dyers grain, and Mellions fifteen dayes after they put forth of the earth.

Also seeds prosper better being sown in temperate weather then in hot, cold, or dry dayes. In the month of April the Moon being new, sow Marjoram, Flowre-gentle, Time, Violets : in the full Moon Apples of Love. and marvellous apples ; and in the Wain, Hartichokes, Holy thistle, Cabage, Cole, Citrons, Hartshorn, Samphire Gillyflowres and Parsnips.

Seeds must be gathered in fair weather at the wain of the Gathering of Moon, and kept some in Boxes of Wood, some in bags of Lea-seeds. ther, and some in Vessels of Earth, and after to be well cleansed and dryed in the Sun or shadow : other some, as Onions, Chibols, and Leeks, must be kept in their husks : Lastly, she must know that it is best to plant in the last quarter of the Moon : to gather grafts in the last but one, and to graft two dayes after the change ; and thus much for her Knowledge briefly of Hearbs, and how she shall have them continually for her use in the Kitchen.

It resteth now that I proceed unto Cookery it self, which is Of Cookery the dressing and ordering of meat, in good and wholsome and the parts manner ; to which when our Housewife shall address her self, thereof. she shall well understand that these qualities must ever accompany it : First, she must be cleanly both in body and garments, she must have a quick eye, a curious nose, a perfect taste, and ready ear ; (she must not be butter fingered ; sweet toothed, nor faint hearted) for the first will let every thing fall, the second will consume what it should increase ; and the last will lose time with too much niceness. Now for the substance of the Art it self, I will divide it into five parts : The first, Sallets and Fricases ; the second, boyled Meats and Broths ; the third, Roste meats and Carbonadoes : the fourth Bak't meats and Pyes ; and the fifth banquetting and made dishes, with other conceits and secrets.

First then to speak of Sallets. there be some simple, some Of Sallets, compound.d, some onely to furnish out the Table, and some simple and both for use and adornation : your simple Sallets are Chibols plain,

pilled, washt clean, and half of the green topps cut clean away, so served on a fruit dish. or Chives, Scallions, Radish; rooter, boyled Carrets, Skirrets, and Turnips. which such like served up simply: also, all young Lettice, Cabbage-lettice, Parsling, and divers other herbs which may be served simply without any thing but a little Vineger Sallet Oyl, and Sugar: Onions boyled, and stript from their rind, and served up with Vineger, Oyle, and Pepper; is a good simple Sallet; so is Camphire, Beans, &c. Sparagus, and Cucumbers, served in likewise with Oyle, Vineger, and Pepper, with a world of others, too tedious to nominate.

Of compound
Sallets.

Your compound Sallets, are first the young Buds and Knots of all manner of wholsome Herbs at their first springing; as red Sage, Mint, Lettice Violets, Marigolds, Spinage, and many other mixed together. and then served up to the Table with Vinaga, Sallet-Oyle, and Sugar.

Another com-
pound Sallet.

To compound an excellent Sallet, and which indeed is usuall at great Feasts, and upon Princes Tables. Take a good quantity of blancht Almonds, and with your shredding knife cut them grossely; then take as many Raisins of the Sun clean washt, and the stones pickt out, as many Figs sturd like the Almonds, as many Capers, twice so many Olives, and as many Currants as of all the rest, clean washt. a good handfull of the small tender leaves of red Sage and Spinage: mix all these well together with good store of Sugar, and lay them in the bottome of a great dish; then put into them Vineger and Oyle, and scrape more Sugar over all: then take Oranges and Lemmons, and paring away the outward pilles. cut them into thinne slices, then with those slices cover the Sallet all over; which done, take the fine thinne leafe of the red Coleflowre, and with them cover the Oranges and Lemmons all over; then over those Red leaves lay another course of old Olives, and the slices of well pickled Cucumbers, together with the very inward heart of Cabbage let it be cut into slices, then adorn the sides of the dish. and the top of the Sallet with more slices of Lemons and Oranges, and so serve it up.

To make an excellent compound boyld Sallet: take of
Spinage,

Spinage well wafht, two or three handfuls, and put into it fair water, and boyl it till it be exceeding foft, and tender as pap; then put it into a Cullander, and drain the water from it, which done, with the back fide of your Chopping knife chop it, and bruife it as fmall as may be; then put it into a Pipkin with a good lump of fweet butter, and boyl it over againe; then take a good handfull of Currants cleane wafht, and put to it, and ftir them well together; then put to as much Vinegar as will make it reasonable tart, and then with Sugar feafon it according to the taft of the Mafter of the houfe, and fo ferve it upon fippets.

An excellent
boyled Sallet.

Your preferved Sallats are of two kinds, either pickled, as are Cucumbers, Samphire, Puffin, Broom, and fuch like; or preferved with Vinegar, as Violets, Primrofe, Cowflips, Gilly flowers, of all kinds, Broom flowers, and for the moft part any wholefome flower whatfoever.

Of preferving
of Sallats.

Now for the pickling of Sallats, they are only boyled and then drained from the water, fpread upon a Table, and good ftore of falt thrown over them, then when they are thorough cold, make a pickle with water, falt, and a little vinegar, and with the fame, put them up in clofe earthen pots, and ferve them forth as occafion fhall ferve.

Now for preferving of Sallats; you fhall take any of the flowers before-faid, after they have been pickt cleane from their fticks, and the white ends (of them which have any) cleane cut away, and wafht and dried, and taking a glaffe pot, like a Gally pot, or for want thereof a gally-pot it felfe, and firft fhew a little Sugar in the bottom, then lay a layer of the Flowers, then cover that layer over with Sugar, then lay another layer of the Flowers, and another of Sugar; and thus do one above another till the pot be filled, ever and anon preffing them hard down with your hand: this done, you fhall take of the beft and fharpft Vinegar you can get, (and if the Vinegar be diftilld vinegar, the flowers will keep their colours the better) and with it fill up your pot till the Vinegar swim abate, and no more can be received; then ftop up the pot clofe, and fet them in a dry temperate place, and ufe them at pleasure, for they will laft all the year.

The making
of Strange
Sallets.

Now for the compounding of Sallats, of these pickled and preserved things, though they may be served up simply of themselves, and are both good and dainty; yet for better curi-osity, and the finer adorning of the Table, you shall thus use them. First, if you would set forth any Red flower, that you know or have seen, you shall take your pots of preserved Gilliflowers, and lining the colours answerable to the flower you shall proportion it forth, and lay the shape of the Flower in a Fruit dish; then with your Purslan leaves, make the green Coffin of the Flower, and with the Purslan stalks, make the stalk of the flower, and the divisions of the leaves and branches: then with the thinnest slices of Cowcumbers, make their leaves in true proportions, jagged or otherwise: and thus you may set forth some full blown, some half blown, and some in the bud, which will be pretty and curious. And if you will set forth yellow flowers, take the pots of Prim-roses and Cowslips, if blew flowers, then the pots of Vio-lets, or Buglosse flowers; and these Sallets are both for shew and use, for they are more excellent for taste, then for to look on.

Sallets for
shew only.

Now for Sallets for shew only, and the adorning and set-ting out of a Table with number of dishes, they be those which are made of Carret roots of sundry colours well boyled, and cut into many shapes and proportions, as some into Knots, some in the manner of Scutcons, and Armes, some like Birds, and some like Wild Beasts, according to the Art and cunning of the Workman; and these for the most part are seasoned with Vinegar, Oyl, and a little Pepper. A World of other Sallets there are, which time and experience may bring to our House-wives eye, but the composition of them, and the serving of them, differeth nothing from these already rehear-sed.

Of Fricases
and Quel-
quechofes.

Now to proceed to your Fricases, or Quelquechofes, which are dishes of many compositions, and ingredients, as Flesh, Fish, Eggs, Herbs, and many other things, all being prepared and made ready in a frying pan, they are likewise of two sorts, simple and compound.

Of simple
Fricases.

Your simple Fricases are Egges and Collops fryed, whether
th:

the Collops be of Bacon, Ling, Beef, or young Pork, the frying whereof is so ordinary, that it needeth not any relation, or the frying of any Flesh, or Fish simple of it self with butter or sweet Oyl.

To have the best Collops and Egges, you shall take the Best Collops whitest and youngest Bacon, and cutting away the sword, cut and eggs. the Collops into thinne slices, lay them in a dish, and put hot water unto them, and so let them stand an hour or two, for that will take away the extreame saltnesse; then drain away the water cleane, and put them in a dry pewter dish, and lay them one by one, and set them before the heat of the fire, so as they may toast; and turne them so, as they may toast sufficiently thorow and thorow: which done, take your Egges; and break them into a dish, and put a spoonfull of Vinegar unto them: then set on a clean Skillet with fair water on the fire, and as soon as the water boyleth, put in the Egges, and let them take a boyl or two; then with a spoon try if they be hard enough, and then take them up and trim them, and dry them, and then dishing up the Collops, lay the Eggs upon them, and so serve them up: and in this sort, you may poach Egges when you please, for it is the best and most wholesome.

Now the compound Fricases are those which consist of many things, as Tansies Fritters, Pancakes, and any Quelque-chose whatsoever, being things of great Request and Estimation in France, Spain, and Italy, and the most curious Nations.

First, then for making the best Tansie, you shall take a certain number of Egges, according to the bignesse of your Frying-panne, and break them into a dish, abating ever the white of every third Egge: then with a spoon, you shall cleanse away the little white Chicken knots, which stick unto the yolks; then with a little Cream, beat them exceedingly together: then take of green Wheat blades, *Violet leaves*, *Strawberry leaves*, *Spinage*, and *Succory*, of each a like quantity, and a few *Walnut Tree buds*; chop and beat all these very well, and then strain out the juyce, and mixing it with a little more Cream, put it to the Egges, and stir all well together; then

Of the compound Fricas-

To make the best Tansie.]

put in a few Crumbs of bread, fine grated bread, Cinamon, Nutmegge, and Salt; then put some sweet Butter into the Frying-pan, and so soon as it is dissolved or melted, put in the Tackey, and fry it brown without burning, and with a dish turn it in the panne as oee sign shall serve; then serve it up, having strowed good store of Sugar upon it, for to put in Sugar before, will make it havy: Some use to put of the herb Tansy into it, but the Walnut-tree buds do give the better tast or rellish and therefore, when you please for to use the one, doe not use the other.

The best Fritters.

To make the best Fritters, take a pint of Cream and wrin it; then take eight Egges, only abate four of the Whites, and beat them well in a dish, and so mixe them with the Cream; then put in a little Cloves, Mace, Nutmeg, and Saffion, and stirre them well together: then put in two spoonfulls of the best Ale barm, and a little Salt, and stirre it again, then make it thick according unto your pleasure with wheat flower; which done, set it within the air of the fire, that it may rise and swell, which when it doth, you shall beat it in once or twice; then put into it a penny pot of Sack: all this being done, you shall take a pound or two of very sweet seame, and put it into a panne, and set it over the fire, and when it is moulten, and beginnes to bubble, you shall take the Fritter-batter, and setting it by you, put thick slices of well pared Apples into the Batter, and then taking the Apples and Batter out together with a spoon, put it into the boyling seame, and boyl your Fritters crispe and brown: And when you find the strength of your seame consume or decay, you shall renew it with more seame: and of all sorts of seame, that which is made of the Beef suet is the best and strongest. when your Fritters are made, strow good store of Sugar and Cinamon upon them, being saide dish, and so serve them up.

The best Pancakes.

To make the best Pancake, take two or three Egges, and break them into a dish, and beat them well; then add unto them a pretty quantity of fair running Water, and beat all well together: then put in Cloves, Mace, Cinamon, and Nutmeg, and season it with Salt; which done, make it as thick as
you

you think good with fine Wheat-flower, then fry the Cakes as thinne as may be with sweet butter, or sweet seame, and make them brown, and so serve them up with Sugar, strowed upon them. There be some which mixe Pancakes with new Milk or Cream, but that makes them tough, cloying and not so crispe, pleasant and savory as running water.

To make the best Veale Tests, take the Kidney, fat and all, Veal Tests.
of a loyn of Veale roasted, and shred it as small as is possible; Then take a couple of Egges and beat them very well; which done, take Spinage, Saccory, Violet-leaves, and Marigold-leaves, and beat them, and strain out the juyce, and mixe it with the Egges: then put it to your Veale, and stirre it exceedingly well in a dish; then put to good store of Currants clean washed and pickt, Cloves, Mice, Cinamon, Nutmeg, Sugar, and Sale, and mixe them all perfectly well together: then take a manchet and cut it into Tests, and toast them well before the fire; then with a spoon lay upon the Test in a good thickness, the Veal, prepared as before-said; which done, put into your Frying-pan good store of sweet butter, and when it is well melted and very hot, put your Testes into the same with the bread side upward, and the flesh side downward, and as soon as you see they are fryed brown, lay upon the upper side of the Test which are bare, more of the flesh meat, and then turn them and fry that side brown also; then take them out of the panne, and dish them up, and strow Sugar upon them, and so serve them forth.

There be some Cooks which will do this but up in one side of the Tests, but to do it on both is much better; if you add Cream it is not amisse.

To make the best Panperdy, take a dozen Egges, and break To make the best Panperdy.
them, and beat them very well; then put unto them Cloves, Mice, Cinamon, Nutmeg, and good store of Sugar, with as much Sall as shall season it: then take a Manchet, and cut it into thick slices like Tests; which done, take your Frying-panne, and put into it good store of sweet butter, and being melted, lay in your slices of bread, then powre upon them one half of your Egges, then when it is fryed, with a dish turn your slices of bread upward, and then powre on them the other

ther half of your Egges, and so turn them till both sides be brown; then dish it up, and serve it with Sugar strewed upon it.

To make any Quelquechose To make a Quelquechose, which is a mixture of many things together; take the Egges and break them, and do away one half of the Whites, and after they are beaten, put them to a good quantity of sweet Cream, Currants, Cinamon, Cloves, Mace, Salt, and a little Ginger, Spinage, Endive, and Mary-gold flowers grossly chopt, and beat them all very well together; then take Pigges Pettitoes slic'd and grossly chopt, mixe them with the Egges, and with your hand stirre them exceeding well together; then put sweet butter in your Frying-panne, and being melted, put in all the rest, and fry it brown without burning, ever and anon turning it, till it be fryed enough; then dish it up upon a flat plate, and so serve it forth. Only here is to be observed, that your Pettitoes must be very well boyled before you put them into the Fry-cake.

Additions to the Housewife And in this manner, as you make this Quelquechose, so you may make any other, whether it be of flesh, small Birds, sweet Roots, Oysters, Mussels, Cockles, Giblets, Lemons, Oranges, or any Fruit, Pulse, or other Sallat herb whatsoever, of which to speak severally, were a Labour infinite, because they vary with mens opinions. Only the composition, and work is no other than this before prescribed; and who can do these, need no further instruction for the rest. And thus much for *Sallets* and *Fricasces*.

Cookery. **To make Fritters.** To make Fritters another way; take Flower, Milk, Barm, grated bread, small Raisins, Cinamon, Sugar, Cloves, Mace, Pepper, Saffron, and Salt; stirre all these together very well with a strong spoon, or small ladle, then let it stand more than a quarter of an hour, that it may rise; then beat it in again, and thus let it rise, and be beat in twice or thrice at least; then take it and bake them in sweet and strong seame, as hath been before shewed, and when they are served up to the Table, see you strow upon them good store of Sugar, Cinamon, and Ginger.

To make the best white Puddings.

Take a pint of the best, thickest, and sweetest Cream, and boyl

boyl it, then whilst it is hot, put thereunto a good quantity of great sweet Oatmeale Grots very sweet, and clean pickt, and formerly steeped in milk twelve hours at least, and let it soak in this Cream another night; then put thereto at least eight yolkes of Egges, a little Pepper, Cloves, Mace, Saffron; Currants, Dates, Sugar, Salt, and great store of Swines Suet, or for want thereof, great store of Beef suet, and then fill it up in the formes according unto the order of good Housewifery; and then boyl them on a soft and gentle fire, and as they swell, prick them with a great Pin, or small Awl, to keep them that they burst not; and when you serve them to the Table, *(which must not be until they be a day old)* first boyl them a little, then take them out, and toast them brown before the fire, and so serve them, trimming the edge of the dish either with Salt or Sugar.

Take the Liver of a fat Hogge, and parboyl it; then shred it small, and after beat it in a Mortar very fine; then mixe it with the thickest and sweetest Cream, and strain it very well through an ordinary strainer: then put there to six yolkes of Egges and two Whites, and the grated crummies of (near hand) a penny White loave with good store of Currants, Dates, Cloves, Mace, Sugar, Saffron, Salt, and the best Swines suet, or Beef-suet, but Beef-suet is the more wholsome, and lesse loosning; then after it hath stood a while, fill it into the Formes, and boyl them as before shewed: and when you serve them unto the Table, first boyl them a little, then lay them on a Gridiron over the coals, and broyl them gently, but scorch them not, nor in any wise breake their skinned, which is to be prevented by oft turning and tossing them on the Gridiron, and keeping a slow fire.

Puddings of a
Hogs Liver.

Take the Yolkes and Whites of a dozen or fourteen Egges, and having beat them very well, put unto them the fine powder of Cloves, Mace, Nutmegges, Sugar, Cinamon, Saffron, and Salt; then take the quantity of two loaves of white grated Bread, Dates (very small shred) and great store of Currants, with good plenty either of Sheepe, Hoggs, or Beef suet beaten and cut small: then when all is mixt, and stirred well together, and hath stood a while to settle, then fill it into the
Formes

To make
bread pud-
dings.

Farms, as hath been before shew'd, and in like manner boyl them, coos them, and serve them to the Table.

Rice puddings.

Take halfe a pound of Rice, and steep it in new Milk a while whilst, and in the morning drain it, and let the Milk drop away, and take a quart of the best, sweetest, and thickest Cream, and put the Rice into it, and boyl it a little; then let it to cool in hour or two, and after put in the Yolkes of halfe a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates, Sugar, and Sale; and having mixt them well together, put in great store of Beef first well beaten, and small shred, and so put it into the farms, and boyl them as before shew'd, and serve them after a day old.

Another of Liver.

Take the best Hogs Liver you can get, and boyl it extremely, till it be as hard as a stone, then lay it to cool, and being cold, upon a bread grater grate it all to powder; then sift it through a fine Meal-sive, and put to it the crummes of (at least) two penny loaves of white bread, and boyl all in the thickest and sweetest Cream you have, till it be very thick; then let it cool, and put to it the yolkes of half a dozen Eggs, a little Pepper, Cloves, Mace, Currants, Dates small shred, Cinamon, Ginger, a little Nutmeg, good store of Sugar, a little Saffron, Salt, and of Beef, and Swines suet, great plenty, then fill it into the Farms, and boyl them as before shew'd.

Puddings of a Calves Mugget.

Take a Calves Mugget, clean and sweet drest, and boyl it well; then shred it as small as is possible, then take of Strawberry leaves, of Endive, Spinage, Succory, and Sarnell, of each a pretty quantity, and chop them as small as is possible, and then mixe them with the Mugget; then take the yolkes of half a dozen Eggs, and three whites, and beat them into it also; and if you find it is too stiffe, then make it thinner with a little Creame warmed on the fire, then put in a little Pepper, Cloves, Mace, Cinamon, Ginger, Sugar, Currants, Dates, and Sale, and work altogether, with casting in little pieces of sweet butter one after another, till it have received good store of butter, then put it up in the Calves-bag, Sheeps-bag, or Horse-bag, and then boyl it well, and so serve it up.

Take

Take the blood of a Hogge whilst it is warme, and steep A Fudding.
it in a quart or more of great Oate-meal grotes, and at
the end of three dayes with your hands take the Grotes out of
the blood, and drain them clean; then put to those Grotes
more then a quart of the best Cream warm'd on the fire; then
the mother of Time, Parsley, Spinage, Succory, Endive, Sor-
rell, and Straw-berry leaves, of each a few chopt exceeding small,
and mixe them with the Grotes, and also a little Fennel-seed,
finely beaten, then adde a litle Pepper, Cloves, and Mace, Salt,
and great store of Cit finely shred, and well beaten: then there-
with fill your Forms, and boyl them, as hath been before de-
scribed.

Take the largest of your Chins of Pork, and that which is Links,
called a Liss, and first with your Knife cut the lean thereof in-
to thinne slices, and then shred small those slices, and then
spread it over the bottome of a dish or wooden platter: then
take the fat of the Chine and the liss, and cut it in the very
same manner, and spread it upon the lean, and then cut
the lean, and spread it upon the fat, and thus do one lean
upon another, till all the Pork be shred, observing to beginne
and end with the lean: then with your sharp Knife scotch
it through and through divers waves, and mixe it all well to-
gether: then take good store of Sage, and shred it exceeding
small, and mixe it with the flesh: then give it a good season
of Pepper and Salt, then take the formes made as long as is
possible, and not cut in pieces as for puddings, and first blow
them well to make the meat fill up and then fill them: which done,
with thred divide them into severall links as you please: then
hang them up in the corner of some Chimney clean kept, where
they may take air of the fire, and let them dry there at least four
dayes before they be eaten: and when they are served up let them
be either fry'd, or boyl'd on the Grydiron, or else roasted about
a fire.

It is thus now that we speak of boyl'd meat and brothes. Of boyl'd
which is as much as our Hottell: it is intend'd to be generall, meats ordinary
to them can as well feed the poor as the rich. we first begin
with the ordinary which being boyl'd meats which are of use
every good mans house; therefore to make the best ordi-
nary

nary Pottage, you shall take a rack of mutton cut into pieces ; or a leg of mutton cut into pieces ; for this meat, and these joynts are the best although any other joynt or any fresh Beef will likewise make good Pottage, and having washt your meat well, put it into a clean pot with fair water, and set it on the fire then take *Pistia* leaves, *Succory*, *Strawberry* leaves, *Spinnage*, *Lang-d-beef*, *Marygold* flowers, *Scallions*, and a little *Parsley*, and chop them very small together : then take half so much Oat meal well beaten as there is herbs, and mixe it with the herbs, and chop all very well together, then when the pot is ready to boyl, scum it very well, and then put in your Herbs, and so let it boyl with a quick fire, stirring the meat oft in the pot, till the meat be boyl'd enough, and that the herbs and water are mixt together without any separation, which will be after the consumption of more then a third part : Then season them with salt and serve them up with the meat, either with sippets or without.

Pottage without sight of herbs.

Some desire to have their pottage green, yet no herbs to be seen, in this case, you must take your herbs and oat meal, and after it is chopt put it into a stone mortar, or bowl ; and with a wooden pestle beat it exceedingly, then with some of the warme liquor in the pot, strain it as hard as may be, and so put it in and boyl it.

Pottage without herbs.

Others desire to have pottage without any herbs at all, and then you must only take Oat meal beaten, and good store of Onions and put them in, and boyl them together; and thus doing you must take a greater quantity of oat meal then before.

Pottage with herbs.

If you will make pottage of the best and daintiest kind, you shall take Mutton, Veal or Kidde, &c having broken the bores but not cut the flesh in pieces, and washt it, put it into a pot with fair water, after it is ready to boyl, and thoroughly skum'd, you shall put in a good handfull or two of small Oat meal : and then take whole Lettice, of the best and most inward leaves, whole Spinnage, Endive, Succory, and whole leaves Cole flowers or the inward part of white Cabbage, with two or three slic't Onions : & put all into the pot, and boyl them well together till the meat be enough, and the Herbs so soft as may be, and stirre them oft well together ; and then season it with salt, and as much Verjuyce

juyce as will only turn the tast of the Pottage ; and to serve them up, covering the meat with the whole herbs ; and adorning the dish with sippets.

To make ordinary stew'd broth, you shall take a neck of Veal To make ordinary stew'd broth. or a legg, or mary bone of beef, or a pullet, or mutton, and after the meat is washt, put it into a pot with fair water, and bring it to boly, skumme it well : then you shall take a couple of Manchets, and paring away the crust, cut it into thick slices, and lay them in a dish, and cover them with hot broth out of the pot ; when they are steapt, put them and some of the broth into a strainer and strain it, and then put it into a pot : then take halfe a pound of Prunes, halfe a pound of Raisins, and a quarter of a pound of Currants cleane pickt and washt, with a litle whole Mace and two or three bruised Cloves, and put them into the pot, and stirre ail well together, and so let them boyle till the meat be enough, then if you will alter the colour of the broth, put in a litle Turnfoyle, or red Sanders, and so serve it upon sippets, and the fruit uppermost.

To make an excellent boyled meat, take four pieces of a rack A fine boyled meat. of mutton, and wash them clean, and put them into a pot well scoured with fair water ; then take a good quantity of Wine and Verjuyce, and put it into it ; then slice a handfull of Onions, and put them in also, and so let them boyl a good while, then take a peece of sweet Butter with Ginger and Salt, and put it to also, and then make the broth thick with grated bread, and so serve it forth with sippets.

To boyl a Mallard curiously, take the Mallard when it is fair dressed, washed and trust, and put it on a spit and roast it till you get the gravy out of it : then take it from the spit and boyl it, then take the best of the broth into a pipkin, and the gravy which you saved, with a peece of sweet butter, and Currants Vinegar, Pepper, and grated Bread : Thus boyl all these together, and when the Mallard is boyled sufficiently, lay it in a dish with sippets, and the broth upon it, and so serve it forth.

To make an excellent Olepouide, which is the onely principall

pull dish of boyled meat which is esteemed in all *Spain*: you shall take a very large vessel p t or Kettle, and filling it with water, you shall set it on the fire, and first put in good thick gobbets of well fed beef, and being ready to boyl, skum your pot; when the beef is half boyled, you shall put in it Potato-roots, Turneps and Carrets: also like gobbets of the best Mutton, and the best Pork; after they have boyled a while: you shall put in the like gobbets of Venison red and Fallow if you have them; then the like gobbets of Veal, Kid, and Lamb a little space after these, the fore parts of a fat Pigge, and a cramb'd Pullet: then put in Spinage, Endive, Succory, Marygold leaves and flowers, Lettice, Violet leaves, Strawberry leaves, Bugloss and Scallions all whole and unchopt, then when they have boyled a while, put in a Partridge and a Chicken chopt in pieces, with Quails, Rayles, Black birds, Larks, Sparrowes, and other small birds, all being well and tenderly boyled, season up the broth with good store of Sugar, Cloves, Mace, Cinamon, Ginger, and Nutmeg, mixt together in a good quantity of Verjuice and Salt, and so stirre up the pot well from the bottome: then dish it up upon great Charges or long Spanish Dishes made in store of sippets in the bottome: then cover the meat all over with Prunes, Raisins, Currants, and blancht Almonds, boyled in a thing by themselves; then cover the fruit and the whole boyled herbs, and the herbs with slices of Oranges and Lemmons, and lay the roots round about the sides of the dish, and strew good store of Sugar over all, and so serve it forth.

To make the
best white
broth,

To make the best white broth, whether it be with Veal Capon, Chickens, or any other fowl or Fish: First boyl the flesh or Fish by it self, then take the value of a quart of strong Mutton broth, or sad Kid broth, and put it into a pipkin by it self, and put into it a bunch of Time, Marjoram, Spinage, and Endive bound together; then when it seeths, put in a pretty quantity of Bace-marrow, and the marrow of mutton with some whole Mace and a few bruised Cloves: then put in a pint of White wine with a few whole slices of Ginger; after they have boyled a while together, take blancht Almonds, and having beaten them together in a mortar with some of the broth, strain them and
put

put it in also : then in another Pipkin boyl Currants, Prunes, Raisins and whole Cinamon in Verjuyce and Suger with a few sliced Dates ; and boyl them till the verjuyce be most part consumed, or at least come to sirrup ; then drain the fruit from the sirrup, and if you see it be high coloured, make it white with sweet cream warmed, and so mixe it with your Wine broth : then take out the Capon or the other flesh or Fish, and dish it up dry in a dish ; then pour the broth upon it, and lay the fruit on the top of the meat, and adorn the side of the dish with very dainty sippets, First Orenge, Lemons and Suger, and so serve it forth to the table.

To boyl any wild Fowl, *Mallard, Teal, Widgeon*, or such like : To boyl any
First boyl the Fowl by it self, then take a quart of strong Mut wild fowl.
ton broth, and put it into a Pipkin and boyl it ; then put unto it good store of sliced Onions, a bunch of sweet roe herbs and a lump of sweet butter : after it hath boyled well, season it with verjuyce salt and suger, and a little whole Pepper ; which done, take up your fowl and break it according to the fashion of carving, and stick a few Cloves about it : then put it into the broth with Onions, and there let it take a boyl or two, and so serve it and the broth forth up in the sippets : some use to thicken it with toasts of bread steeped and strained, but that is as pleases the Cook.

To boyl a leg of Mutton, or any other joynt of meat what
sever, first if you have washed it cleane, put it a little, then
sit it and give it halfe a dozen turnes before the fire, then draw it
when it begins to drop and presse it between two dishes, and save
the gravy ; then slash it with your Knife, and give it halfe a
dozen turnes more, and then presse it again, and thus doe
as often as you can force any moysture to come from it ; then
mixing Mutton broth, White Wine, and Verjuyce toge-
ther, boyl the Mutton therein till it be tender, and that most part
of the liquor is cleane consumed ; then having all that while kept
the gravy you took from the Mutton stewing gently upon a
Chafing dish and coals, you shall adde unto it good store of
salt, Suger, Cinamon and Ginger, with some Lemon slices, and
a little of an Oenge peel, with a few fine white bread crummes :
then taking up the Mutton, put the remainder of the broth in
F and

and put in likewise the gravy, and then serve it up with sippets, laying the Lemmon slices uppermost, and trimming the Dish about with uger.

If you will boyl Chickens, young Turkeys, Pea-hens, or House fowle daintily ; you shall, after you have trimmed them, drawn them, trust them ; and washt them, fill their belleys as full of Parsley as they can hold ; then boyle them with Salt and water onely, till they be enough : then take a dish and put into it Verjuice and Butter, and Salt, and then when the butter is melted, take the Parsley out of the Chickens belly, and mince it very small, and then put it to the Verjuice and Butter : and stir it well together ; then lay in the Chickens, and trimme the dish with sippets and so serve it forth.

A broth for
any fresh fish.

If you will make broth with any fresh Fish whatsoever, whether it be Pike, Bream, Carp, Eele, Barbel, or such like : you shall boyl water, Verjuice and Salt together with a handfull of sliced Onyons; then you shall thicken it with two or three spoonfulls of Ale barm, then put in a good quantity of whole Barberries, both branches and other, as also pretty store of Currants : then when it is boyled enough, Dish up your Fish and poure your broth unto it, laying your fruit and Onyons uppermost. Some to this broth will put Prunes and Dates sliced, but it is according to the fancy of the Cook, or the Will of the Householder.

Additions to
boyl meat.

Thus I have from these few presidents shewed you the true Art and making of all sorts of boyled meats, and broths and though men may coyn strange names, and feign strange Arts, yet be assured he that can do these, may make any other whatsoever, altering the tast by the alteration of the compounds as he shall see occasion ; And when a broth is too sweet, to sharpen it with Verjuice, when too tart to sweeten it with Sugar ; when flat and wallowish, to quicken it with Oreniges and Lemmons ; and when too bitter to make it pleasant with herbs and spices.

A Mallard
smoared, or a
Hare, or old
Cowy.

Take a Mallard when it is clean dressed, washed and trust, and parboyl it in water. till it be skumm'd and purified : then take it up, and put it into a Pipkin with the neck downward, and the tayl upward, standing as it were, upright : then fill the

Pipkin

Pipkin half full with that water, in which the Mallard was par-boyled, and fill up the other half with white wine : then peel and slice thin a good quantity of Onyons, and put them in with whole fine hearbs, according to the time of the year, as Lettice, Strawberry leaves, Violet leaves, Vine leaves, Spinage, Endive, Succory, and such like, which have no bitter or hard taste, and a pretty quantity of Currants and Dates sliced : then cover it close, and set it on a gentle fire, and let it stew, and smoor till the hearbs and onyons be soft, and the Mallard enough, then take out the Mallard, and Carve it as if it were to go to the Table : then to the broth put a good lump of butter, Sugar, Cinamon ; and if it be in Summer, so many Gooseberries as will give it a sharp taste, but in the Winter, as much Wine vinegar then heat it on the fire and stir all well together : then lay the Mallard in a dish with sippets, and pour all this broth upon it, then trim the edge of the dish with Sugar, and so serve it up. And in this manner you may also smoor the hinder parts of a Hare, or a whole old Cony, being trust up close together.

After your Pike is drest and opened in the back, and laid flat, as if it were to frye, then lay it in a large dish for the purpose, able to receive it ; then put as much White wine to it, as will cover it all over ; then set it on a chafingdish and coals to boyl very gently, and if any skum arise, take it away ; then put to it Currants, Sugar, Cynamon, Barberberries, and as many Faines as will serve to garnish the dish, then cover it close with another dish and let it stew till the fruit be soft, and the Pike enough ; then put to it a good lump of sweet butter ; then with a fine skummer, take up the fish, and lay it in a clean dish with sippets, then take a couple of yolke of eggs, the film taken away, and beat them well together with a spoonfull or two of Creame, and as soon as the Pike is taken out put it into the broath and stir it exceedingly, to keep it from curding. then pour the broth upon the Pike, and trim the sides of the dish with Sugar, Prunes, and Barberberries, slices of Orenge or Lemmons, and so serve it up. And thus may you also stew Roches, Gurnets, or almost any sea fish or fresh fish.

Take a Lambs head and Purtenance, clean washt and pickt, and put it into a Pipkin with fair water, and let it boyl, and
To stew a
Lambs head &
skum Purtenance.

skumme it clean, then put Currants and a few sliced Dates, and a bunch of the best farcing herbs tyed up together, and so let it boyl well till the meat be enough : then take up the Lambs head and Purtenance, and put it into a clean dish with sippers ; then put in a good lump of butter, and beat the yolks of two eggs with a little Cream and put it to the broth with Sugar, Cinamon, and a spoonfull or two of Verjuice and whole Mace, and as many Prunes as will garnish a dish, which should be put in when it is but halfe boyled, and so pour it upon the Lambs head and Purtenance, and adorn the sides of the dish with Sugar, Prunes, Barbories, Oranges, and Lemons, and in no case forget not to season it well with salt, and to serve it up.

A Breast of
Mutton
stew'd.

Take a very good breast of Mutton chopt into sundry large peeces, and when it is clean washt, put it into a pipkin with fair water, and set it on the fire to boyl ; then skumme it very well, then put in of the finest parsnips cut into large peeces as long as ones hand and clean washt and scrap'd ; then good store of the best Onions, and all manner of sweet pleasant Pot herbs and Lettice, all grossly chopt, and good store of Pepper and Salt, and then cover it and let it stew till the Mutton be enough, then take up the mutton, and lay it in a clean dish with sippers, and to the broth put a little wine vinegar, and so pour it on the mutton with the Parsenips whole, and adorn the sides of the dish with Sugar, and so serve it up. And as you do with the breast, so you may doe with any other joynt of Mutton.

To stew a
Neats foot.

Take a Neats foot that is very well boyld (for the tenderer it is the better it is, and cleave it in two, and with a clean cloth dry it well from the soufe-drink, then lay it in a deep earthen platter and cover it with Verjuice, then set it on a Chafingdish and coals and put to it a few Currants and as many Prunes as will garnish the dish, then cover it and let it boyl well, many times stirring it up with your Knife, for fear it stick to the bottom of the dish ; then when it is sufficiently stewed, which will appear by the tendernefs of the meat and softness of the fruit, then put in a good lump of butter, great store of Sugar and Cinamon ; and let it boyl a little after : then put it altogether into a clean dish with sippers and adorn the sides of the dish with Sugar and Prunes, and so serve it up.

Of Roast
meats.

To proceed then to Roast meats, it is to be understood, that

that in the generall knowledge thereof are to be observed these
 few rules. First the clean keeping and scouring of the spits Observations
 and cob-irons ; next the neat picking and washing of meat, be- in roast meats,
 fore it be spitted, then the spitting and broaching of meat, which
 must be done so strongly and firmly, that the meat may by no
 means either shrink from the spit, or else turn about the spit :
 & yet ever to observe that the spit do not go through any prin- Spitting of
 cipal part of the meat, but such as is of least account and estima- roast meats,
 tion ; and if it be birds, or fowl which you spit, then to let the
 spit go through the hollow of the body of the fowl, and so fasten
 it with pricks or skewers under the wings about the thighs of
 the fowl, and at the feet or Rump, according to your manner of
 trussing and dressing them.

Then to know the Temperatures of fires for every meat, and Temperature
 which have a slow fire, and yet a good one, taking leaseire in of fires,
 roasting, as Chines of Beef, Swans, Turkeys, Peacocks, Bustards,
 and generally any great large Fowle, or any other Joynts of
 Mutton, Veal, Duck, Kidde, Lamb, or such like : whether it be
 Venison red or Fallow ; which indeed would lye long at the fire,
 and soak well in the roasting, and which would have a quick
 and sharp fire without scorching ; as Piggs, Pulllets, Pheasants,
 Partridges, Quails, and all sorts of middle sized, or lesse fowl,
 and all small birds, or compound roast meats, as Olives of Veal,
 Husbles ; a pound of butter roasted, or puddings simple of them-
 selves, and many other such like, which indeed would be sudden-
 ly and quickly dispatcht, because it is intended in Cookery,
 that one of these dishes must be made ready whilst the other
 is in eating. Then to know the complexions of meats, as which The complexi-
 must be pale and white roasted, and yet thoroughly roasted, as Mur- ons of meat.
 ton, Lamb, Kid, Capon, Puller, Pheasant, Partridge, Veal, Quail ;
 and all sorts of middle and small land or water Fowl, & all small
 birds ; which must be so brown roasted, as Beef, Venison, Porke,
 Swan, Geese, Piggs, Crane, Bustards, or any large Fowl, or other
 thing whose flesh is black

Then to know the best basting for meat, which is sweet The best ba-
 Butter, sweet Oyl, Barrel butter, or fine rendred up seame, stings of meats
 with Cinamon, Cloves, and Mace. There be some that will
 baste onely with Water and Salt, and nothing else :

yet it is but opinion, and that must be the worlds Master al-
wayes.

The best
dredging.

Th in the best dredging, which is either fine white bread crums,
well grated; or else a little very white meal, and the crums very
well mixt together.

To know
when meat is
enough.

Let it be known when meat is roasted enough; for as too much
roast is unwholsome, so too much dryness is not nourishing.
Therefore to know when it is in the perfect height, and is nei-
ther too moist nor too dry, you shall observe these signs: First, in
your large joynts of meat, when the steam or smook of the meat
more ascendeth, either upright or else goeth from the fire, when
it beginneth a little to shrink from the spit, or when the gravy
which droppeth from it is cleer without bloodynesse: then is the
meat enough.

If it be a Pigge, when the eyes are fallen out, and the body
leaveth Piping: for the first is when it is half roasted, and would
be singed to make the coat rise, and crackle, and the latter when
it is full enough, and would be drawn: or if it be any kind of
Fowl you roast, when the thighs are tender, or the hinder parts
of the pinions at the setting on of the wings, are without blood,
then be sure that your meat is fully enough roasted: yet for a bet-
ter and more certain assurednesse, you may thrust your Knife
into the thickest parts of the meat, and draw it out again, and
if it bring out white gravy without any bloodynesse, then assu-
redly it is enough, and may be drawn with all speed conveni-
ent, after it hath been well basted with butter not formerly
melted, then dredging as aforesaid, then baste it over the dredging
and so suffered to take two or three turnes, to make it ripe the
dredging: Then dish it in a fair dish with salt sprinkled over it,
and so serve it forth. Thus you see the general sort of roasting
all kind of meat: Therefore now I will return to some particu-
lar dishes, together with their several sauces.

Roasting of
Mutton with
Oysters.

If you will roast Mutton with Oysters, take a shoulder about
or a legge, and after it is washed, parboyl it a little: then take the
great Oysters and having opened them into a dish, draine the gra-
vy clean from them twice or thrice, then parboyl them a little,
then take Spinage, Endive, Succory, Strawberry leaves, Violet
leaves & a little Parsly, with some Scallion chop the same very small
toget-

together, then take your Oysters very dry draind and mix them with an half part of these herbs : then take your meat and with cheefe O flus and herbs farce or stop it, leaving no place empty, then spit it and roast it, and whilst it is in roasting, take good store of Verjuice and Butter, and Salt, and set it in a dish on a chaffing dish and coals ; and when it begins to boyl put in the remainder of your herbs without Oysters and a good quantity of Currants, with Cinamon, and the yolks of a couple of eggs, And after they are well boyled and stirred together, season it up according to your taste with Sugar ; then put in a few Lemmon lices: the meat being enough draw it, and lay it upon this sauce removed into a chaffing dish. the edge thereof being trimmed about with Sugar and serve it forth.

To roast a Leg of Mutton after an Outlandish fashion, you shall take it after it is wash'd, and cut off all the flesh from the bone leaving onely the outside skinned intirely whole and sett to the broil then take thick Cream and the yolks of eggs, and beat them exceedingly well together ; then put in Cinamon, Mace, and a little Nutmegge with Salt : then take bread crumms, finely grated and sift with good store of Currants, and as you mixe them with the Cream, put in Sugar and so make it into a good thick paste : Now if you would have it be kareyn, put in the juice of wat h it is as Spinage, Violet leaves Endive, &c. If you would have it yellow, then put in a little Saffron strained, and with this fill up the skin of your legge of Mutton in the same shape and form as it was before, and stick the outside of the skin thick with Cloves, and so roast it thoroughly and baste it very well, then after it is done serve it up as a legge of Mutton with this padding, for indeed it is no other, you may stop any other kind of meat, as bust or loyn, or the belly of any fowl boyled or roasted. or Rabbit or any meat else which hath skin or empennings, if into this padding also you beat the inward pith of an Oxes back, it is both good in taste and excellent sovereign for any disease, ach, or flux in the reins or whatsoever.

To roast a Leg
of Mutton o-
therwise.

To roast a Gizzet of Mutton, which is the legge splatted and half part of the loyn together, you shall after it is wash'd stop it with Cloves, so spit it and lay it to the fire, and tend it well with basting ; then you shall take Vineger, Butter, and

To roast a
Gizzet of
Mutton.

Currants, and set them on a fire in a dish or pipkin ; then when it boyles you shall put in sweet herbes finely chopt, with the yolk of a couple of eggs, and so let them boyl together : then the meat being half roasted, you shall pare off some part of the leanest and brown, then shred it very small, and put it into the pipkin also : then season it up with Sugar, Cinamon, Ginger, and Salt, and so put it into a clean dish, then draw the Gigger of Mutton and lay it on the sauce, and throw salt on the top and so serve it up.

To roast
Olives of
Veal.

You shall take of a legge of Veal and cut the flesh from the bones, and cut it out into thin long slices : then take sweet herbs, and the white part of Scallions, and chop them well together with the yolks of eggs, then role it up within the slices of Veal, and so spit them and roast them : then boyl Verjusce, Butter, Sugar, Cinamon, Currants and sweet herbs together, and being seasoned with a little salt, serve the Olives up upon the sauce with salt cast over them.

To Roast a
Pigge.

To roast a Pigge curiously, you shall not scald it, but draw it with the hair on, then having washt it, spit it and lay it to the fire, so as it may not scorch, then being a quarter roasted, and the skinn blistered from the flesh with your hand pull away the hair and skin, and leave all the fat and flesh perfectly bare : then with your knife scotch all the flesh down to the bones, then baste it exceedingly with sweet butter and Cream, being no more but warm : then dredge it with fine bread crums, currants, sugar, and salt mixt together ; and thus apply dredging upon basting, and basting upon dredging, till you have covered all the flesh a full inch deep : Then the meat being fully roasted, draw it, and serve it up whole.

To roast a
pound of Butter
well.

To roast a pound of butter curiously and well, you shall take a pound of sweet butter, and beat it stiff with Sugar and the yolks of Eggs, then clap it round wise about a spit, and lay it before a soft fire, and presently dredge it with the dredging before appointed for the Pig : then as it warmeth or melteth, so apply it with dredging till the butter be overcommed and no more will melt to fall from it : then roast it brown, and so draw it, and serve it out, the dish being as neatly trim'd with Sugar as may be.

To roast a pudding upon a spit you shall mixe the pudding
be.

before spoken of in the leg of Mutton, neither omitting herbs or ffeffron, and put to a little sweet butter and mixe it very fliff, then fold it about the spit, and have ready in another dish some of the same mixture well seasoned, but a great deal thinner, and no butter at all in it; and when the pudding doth begin to roast, and that the butter appears, then with a spoon cover it all over with the thinner mixture, and so let it rest: then if you see no more butter appear, then baste it as you did the Pigge, and lay more of the mixture on, and so continue till all be spent; and then roast it brown and so serve it up.

If you will Roast a Chine of Beef, a loyn of Mutton, a Capon, and a Lark, all at one instant, and at one fire, and have all ready together and none burnt you shall first take your Chine of Beef and parboyl it more than half through: Then first take your Capon, being large and fat, and spit it next the hand of the turner, with the leggs from the fire, then spit the Chine of Beef then the Lark, and lastly the loyn of Mutton, and place the Lark so as it may be covered over with the beef and the fat part of the Loyn of Mutton, without any part disclosed; then baste your Capon and your loyn of Mutton with cold water and salt, the Chine of beef with boyling Lard, then when you see the beef is almost enough, which you shall hasten by scorching and opening of it, then with a clean cloath you shall wipe the Mutton and Capon all over, and then baste it with sweet butter till all be enough roasted; then with your knife lay the Lark open, which by this time will be stewed between the beef and mutton, and basting it also with dredge altogether, draw them and serve them up.

If you will Roast any Venison, after you have washt it & cleaned all the blood from it, you shall stick it with cloves all over on the outside; & if it be leane, you shall lard it either with mutton lard, or pork lard, but mutton is the best: then spit it and roast it by a soaking fire, then take vineger, bread crumms, and some of the gravy which comes from the venison, and boyl them well in a dish: then season it with suger, cinamon, ginger and salt, and serve the venison forth upon the sawce when it is roasted enough.

If you will Roast a piece of fresh Sturgeon, which is a dainty dish, you shall stop it with Cloves, then spit it, and let it Roast at great leisure, plying it continually with basting, which will take

take away the hard fire : then when it is enough you shall draw it and serve it upon Venetian sawce, with salt only thrown upon it.

The Roasting of all sorts of meats differeth nothing but in the fire, speed and kisture as is aforesaid, except these compound dishes, of which I have given you sufficient precedents, and by them you may perform any work whatsoever : but for the ordering, preparing, and trussing your meat for the spit or Table, in that there is much difference : for in all royns of meat except a shoulder of Mutton, you shall crush and break the joints well : from Pigg and Rabbers you shall cut off the feet before you spit them, and the head when you serve them to the Table : and the Pigg you shall chine and divide into two parts : Curnes, Pheasant, Chickens, and Turkeys, you shall roast with the Pinions folded up, and the legs extended : Hens, Stock-doves, and House-doves, you shall Roast with the Pinions folded, and the legs cut off by the knees and thrust into the bodies : Quails, Partridges and all sorts of small Birds shall have their Pinions cut away, and the legs extended : all sorts of Water-fowl shall have their Pinions cut away, and their legs pinned backwards : Wood-cocks, Snipes and Stint shall be Roasted with their Heads and Necks on, and their legs thrust into their bodies, and Shovellers and Bitterns shall have no necks but their heads only.

To Roast a
Cows Udder.

Take a Cows Udder, and first boyl it well : then stick it thick all over with Cloves : then when it is cold spit it, and lay it on the fire, and apply it very well with basting of sweet butter, and when it is sufficiently roasted and brown, then dredge it, and draw it from the fire, take vinegar and butter, and put it on a chaffin dish and cook, and boyl it with White bread crum, till it be thick : then put to it good store of Sugar and cream, and putting it into a clean dish, lay the Cows Udder therein, and trim the sides of the dish with Sugar, and so serve it up.

To Roast
a Veal.

Take an excellent good leg of Veal, and cut the thick part into a handfull and more from the Kneele : then take the marrow (which is the filler) and farce it in every part all round with Strawberry leaves, Sorrell, Spinage, Endive, and Sage.

Succeny grossly chopt together, and good store of Onions, then lay it to the fire and roast it very sufficiently and brown, casting good store of Salt upon it, and basting it well with sweet butter: then take of the former herbs much finer chopt than they were for farcing, and put them into a Pipkin with Vinegar and clean washd Currants, and boyl them well together; then when the herbs are sufficiently boyled and soft, take the yolks of foure very hard boyled Eggs, and shred them very small, and put them into the Pipkin also with Suger and Cinamon and some of the pavy which drops from the Veal, and boyl it over again, and then put it into a clean dish, and the fillet being dredged and drawnd, lay upon it and trim the side of the dish with Suger, and so serve it up.

To make an excellent Sauce for a rost Capon, you shall take Onions, and having sliced and peeled them, boyle them in fair water with Pepper, Salt, and a few bread crummes: then put into it a spoonfull or two of claret Wine, the juice of an Orange, and three or four slices of Lemmon peel: all these shred together, and so pour it upon the Capon being broke up.

To make a sauce for an old Hen or Pullet, take a good quantity of Beer and Salt, and mixe them well together with a few fine bread crummes, and boyl them on a chaffing dish and coals: then take the yolks of three or four hard Egges, and being shred small put it to the beer, and boyl it also: then the Hen being almost enough, take three or four spoonfulls of the pavy which comes from her, and put it in also, and boyl all together to an indifferent thicknes: which does, suffer it to be almost cold, but only to keep it warm on the fire, and put into it the juice of two or three Oranges, and the slices of Lemmon, shred small, and the slices of Oranges having also the upper end taken away: then the Hen being broke up, take the brains thereof, and shredding them small, put it into the sauce also, and stirring all well together, put it hot into a clean warme dish, and lay the Hen (broke up) in the same.

The Sauce for Chickens is divers, according to mens tastes: but some will only have Butter, Verjuice, and a little Parsley

Parsley roasted in their bellies mixt together; others will have butter, verjuyce, and Sugar boyld together with toasts of bread and others will have thick sippets with the juyce of sorrel and sugar mixt together.

The best sawce for a Pheasant is water and Onions sliced, Pepper and a little Salt mixt together, and but stewed upon the coal, & then poured upon the Pheasant or Partridge, being broken up, and some will put thereto the juyce or slices of an Orange or Lemon, or both: but it is according to taste, and indeed more proper for Pheasant then Partridge.

Sauce for a Quail, Rile, or any fat big bird, is Claret wine and salt mixt together with the gravy of the bird, and a few fine bread crumbs well boyled together, and either a Sage leaf, or Bay leaf crulht amongst it, according to mens tastes.

Sauce for Pigeons.

The best sauce for Pidgeons, Stock doves, or such like, is Vinegar and butter melted together and partly roasted in their bellies, or Vine leaves roasted and mixed well together.

A general
Sauce for wild
fowl.

The most generall sauce for ordinary wild fowl roasted, as Ducks, Mallard Widgeon, Teal, Snipe, Sheldrake, Plovers, Pouts, Gulls and such like, is only Mustard and Vineger, or Mustard and Verjuyce mixt together; or else an Onion, Water, and Pepper, and some (especially in the Court) use only butter melted, and not with any thing else.

Sauce for
green Geese.

The best sauce for green Geese is the juyce of Sorrel and Sugar mixt together with a few scalded Feberries, and served up on sippets; or else the belly of the green Goose filled with Feberries and so roasted; and then the same mixt with Verjuyce, Butter, Sugar and Cinamon and so served up on sippets.

Sauce for stubble
Geese.

The Sawce for a stubble Goose is divers, according to men's minds, for some will take the pap of roasted Apples, and mixing it with vinegar, boyl them together on the fire with some of the gravy of the Goose, and a few ba berries and bread crumbs, and when it is boyled to a good thicknesse, season it with Sugar and a little Cinamon, and so serve it up: some will add a little Mustard and Onions unto it, and some will not roast the apples, but pare them and slice them, and that is the nearer way, but not the better. Others will fill the belly of the Goose full of Onions shred, and Oatmeal groats, and being

ing roasted enough, mixe it with the gravie of the Goose, and sweet hearbs well boyled together, and seasoned with a little Verjuice.

To make a *Gallintine*, or sauce for a Swan, Bittern, Hern, Crane, A Gallantine, or any large Fowl, take the blood of the same Fowl, and bring Sawce for a furred well, boyl it on the fire, then when it comes to be thick *Swan*. put unto it Vinger a good quantity, with a few fine white bread crumbs, and so boyl it over again; then being come to a good thickness, season it with Sugar and Cynamon, so as it may taste pretty and shup up in the Cinamon, and then serve it up in sauce as you do Mustard, for this is called a *Chunder* or *Gallantine*, and is a sauce almost for any Fowl whatsoever.

To make sawce for a Pig, some take Sage and roast it in the bel. A Sawce for a ly of the Pig; then boyling Verjuice, Butter, and Currants together, take and chop the sage small and mixing the brains of the Pig with it, put all together and so serve it up. *Pig.*

To make sawce for a loyn of Veal, take all kind of sweet Pot A sawce for , herbs, and chopping them very small with the yolks of two or Veal. three Egges, boyl them in Vinger and Butter, with a few bread crumbs, and good store of sugar; then season it with Sugar and Cinamon, and a Clove or two crushed, and so powre it upon the Veal, with the slices of Orenge and Lemmons about the Dish.

Take Orenge and slice them thin, and put unto them White Wine in Rose water, the powder of Mace, Ginger, and Sugar, *Additions unto Sawces.* and set the same upon a Chaffing dish of coals, and when it is half boyled, put to it a good lump of butter, and then lay good store of slices of fine white bread therein, and so serve your Chiccons upon them, and trim the sides of the dish with Sugar.

To be fit water, and set it over the fire; then slice good Sawce for a stor of Onions, and put into it, and also Pepper and Sale Turkie. and good store of the Cravy that comes from the Turkey, and boyl them very well together; then put to it a few fine crumbs of grated bread to thicken it, a very little Sugar, and some Vinger, and so serve it up with the Turkey; or otherwise, take grated White bread and boyl it in white Wine till it be as thick as a Custard; in boyling put in good store of su-
gar

gar, and Cinamon, and then with a little Turnsole make it of a high murrey colour, and so serve it in saucers with the Turkey, in manner of Gallantine.

The best Gallantine.

Take the blood of a Swan, or any other great fowle, and put it into a dish, then take stewed Prunes, and put them into a strainer, and strain them into the blood; then set it on a chaffing-dish and coales, and let it boyl; then stirre it till it come to be thick, and season it very well with Sugar and cinamon, and so serve it in Saucers with the fowl: but this sauce must be served cold.

Sawce for a Mallard.

Take good store of Onions, peel them and slice them, and put them into Vineger and boyl them very well till they be tender; then put into it a good lump of sweet butter, and season it well with Sugar and Cinamon, and so serve it up with the fowl.

Of Carbonadoes.

Charbonadoes, or carbonadoes which is meat broyled upon the coals (and the invention thereof was first brought out of France as appears by the name) are of divers kinds according to mens pleasures: for there is no meat either boyled or roasted whatsoever, but may afterwards be broyled if the master thereof be disposed; yet the general dishes which for the most part are to be carbonadoed, are, a breast of Mutton half boyled; a shoulder of mutton half roasted, the legges, wings, and carcases of Capon, Turkey, Goose, or any other fowl whatsoever, especially Land fowl.

What is to be carbonadoed.

And lastly, the uttermost thick skinne which covereth the ribs of beef, and is call'd (being broyled,) the *laine of Count-Goose*, and is indeed a dish used most for want of melle, sometimes to please the appetite; to which may also be added the broyling of Pigs heads, or the trains of any fowl whatsoever after it is roasted and drest.

The manner of carbonadoing.

Now for the manner of Carbonadoing, it is in this sort; you shall first take the meat you must Carbonado, and broach it both above and below; then sprinkle good store of salt upon it, and baste it all over with sweet butter melted; which done, take your Broyling-iron, I do not mean a Grid-iron (though it be much used for this purpose) because the smoak of the coals, occasioned by the dropping of the meat, will ascend about it, and make

make it stink : but a Plate iron made with hooks and pricks, on which you may hang the meat, and set it close before the fire, and so the Plate heating the meat behind, as the fire doth before, it will both the sooner and with more neatness be ready : then having turned it, and basted it till it be very brown, dredge it, and serve it up with vinegar and butter.

Touching the roasting of Mutton. Venison, or any joynt of Of the roasting
Meat, which is the most excellent of all Carbanadoes, you of Mutton.
shall take the fattest and largest that can possibly be got (for
it is a life of labour, and little meat not worth your time :)
and having scorcht it and cast salt upon it, you shall set it
on a strong fork, with a dripping pan underneath it, before
the face of a quick fire, yet so far off, that it may by no means
scorch, but toast at leisure ; then with that which falls from
it, and with no other basting, see that you baste it continual-
ly, turning it ever and anon many times and so oft, that it
may soak and brown at great leisure ; and as oft as you baste it,
so oft sprinkle Salt upon it ; and as you see it toast, scotch
it deeper and deeper, especially in the thickest and most fleshy
parts where the blood most resteth ; and when you see that no
more blood droppeth from it, but the gravy is cleer and white,
then you shall serve it up either with Venison sawce, with Vine-
ger, Pepper, and Sugar, Cinamon, and the joyce of an Orange
mixt together, and warmed with some of the gravy.

Take Mutton or Lamb that hath been either roasted, or but Additions,
parboyl'd, and with your Knife scotch it many wayes, then lay unto carbona-
it in a deep dish, and put to it a pint of white Wine, and a little does.
whole Mace, a little slice of Nutmeg, and some Sugar, with a lump A Rasher of
of sweet butter, and stew it so till it be very tender ; then take it Mutton or
lamb, and brown it on the Grid-iron, and then laying lippets in Lamb.
the former broth, serve it up.

Take any Tongue, whether of Beef, Mutton, Calves ; Red How to Car-
Dier or Fallow, and being well boyled peel them, cleave bonada
them, and scotch them many wayes ; then take three Tongues.
or four egges broken ; some Sugar, Cinamon, and Nut-
meg, and having beaten it well together, put to it a Lem-
mon cut in thinne slices, and another cleane peel'd, and cut
into little four square bits, and then take the tongue ,
and

and lay it in : and then having melted good store of butter in a frying pan, put the tongue and the rest therein, and so frye it brown, and then dish it, and scrape sugar upon it, and serve it up.

Additions.


For dressing
Fish
How to souse
any fresh fish.

Take any fresh fish whatsoever (as Pike, Bream, Carpe, Barbel, Cheam, and such like,) and draw it, but scale it not ; then take out the Liver and the refuse, and having opened it, wash it : then take a pottle of fair water, a pretty quantity of white Wine, good store of salt, and some vinegar, with a little bunch of sweet herbs, and set it on the fire : as soone as it begins to boyl, put in your fish, and having boyled a little, take it up into a faire vessel, then put into the liquor some grosse Pepper and Ginger, and when it is boyled well together with more salt, set it by to coole, and then put your Fish into it, and when you serve it up, lay Fennel thereupon.

How to boyl
small Fish.

To boyl small Fish, as Roches, Daces, Gudgeon, or Flounder, boyl White wine and water together with a bunch of choyce Herbs, and a little whole Mace, when all is boyl'd well together, put in your fish and scumme it well : then put in the foal of a *Manchet*, a good quantity of sweet batter, and season it with Pepper and Verjuice, and so serve it in upon sippets, and adorn the sides of the dish with Sugar.

To boyl a
Gurnet or
Roch.

First draw your Fish, and either spint it open in the back, or joynt it in the back, and trusse it round : then wash it cleane, and boyl it in Water and Salt, with a bunch of sweet Herbs, then take it up into a large dish, and pour unto it Verjuice, Nutmeg, Butter, and Pepper, and letting it stew a little, thicken it with the yolks of eggs : then hot remove it into another dish, and garnish it with slices of Oranges and Lemons, Barberries, Prunes, and Sugar and so serve it up.

After you have drawn, washt and scaled a fair large Carpe, season it with Pepper, Salt, and Nutmegge, and then put it into a Coffer with good store of sweet butter, and then cast on Raisins of the Sun, the iuyce of Lemons, and some slices of Orange-pils, and then sprinkling on a little Vineger, close up and bake it.

First let your *Tench* blood in the tayle, then scoure it, wash it

it, and scald it, then having dryed it, take the fine crummes of Bread, sweet Creame, the yolks of Egges, Currantes cleane wash'd, a few sweet hearbs, chopt small, season it with Nutmeg and Pepper, and make it into a stiffe paste, and put it into the belly of the Tench, then season the Fish on the outside with Pepper, Salt, and Nutmegge; and so put it into a deep Cossin with sweet butter, and so close up the Pye and bake it; then when it is enough draw it, and open it, and put into it a good peece of preserved Orange minc'd: then take Vinegar, Nutmeg, Butter, Sugar, and the yolk of a new laid Egge, and boyl it on a Chafin-dish and coals, alwayes stirring it to keep it from curding; then pour it into the Pye, shake it well, and so serve it up.

Take a large Trout fair trim'd, and wash it, and put it in a deep pewter dish, then take halfe a pint of sweet Wine, with a lump of butter, and a little whole mace, Parsly, Savory, and Tyme, mince them all small, and put them into the Tenches Belly, and so let it stew a quarter of an houre, then mince the yolk of a hard Egge, and strow it on the Trout, and laying the hearbs about it, and scraping on Sugar, serve it up.

How to stew a Trout.

After you have drawn your Eccles, chop them into small peece of three or four inches, and season them with Pepper, Salt, and Ginger, and so put them into a Cossin with a good lump of butter, great Ruffins, Onions small chopt, and so close it, bake it, and serve it up.

How to bake Eccles.

Next to these already rehearsed, our English Houiewife must be skillfull in Pastry, and know how and in what manner to bake all sorts of meat, and what Paste is fit for every meat, and how to handle and compound such Pastes. As for example, Red Deer Venison, Wild boar, Gunmons of Bacon, Swans, Elkes, Porpus, and such like standing dishes, which must be kept long, would be bak't in a moyst, thicke, tough, course, and long lasting crust, and therefore of all other, your Rye paste is best for that purpose; your Turkey Capon, Pheasant, Partridge, Veal, Peacocks, Lamb, and all sorts of Water Fowle, which are to come to the Table more than once, (yet not many dayes) would be bak't in a good

The pastry and baked meats.

white crust, somewhat thick; therefore your wheate is fit for them; your Chickens, Calves, Oeufes, Olives, Potatoes, Quince, Fallow Deer, and such like: which are most commonly eaten hot, would be in the finest, shortest, and thinnest crust, therefore, your fine Wheat-flower, which is a little baked in the oven; before it be kneaded, is the best for that purpose.

Of the mixture of paste.

To speak then of the mixture and kneading of Pastes, you shall understand that your Rye-paste would be kneaded only with hot water, and a little butter, or sweet Scam, and Rye-flower very finely sifted; and it would be made tough and stiff, that it may stand well in the rising, for the Coffin thereof must ever be very deep; your coarse Wheat-crust should be kneaded with hot water, or Mutton broth, and good store of butter, and the paste made stiff and tough, because that Coffin must be deep also: your fine Wheat crust must be kneaded with as much butter as water, and the paste made reasonable light and gentle, into which you must put three or four egges or more, according to the quantity you bleed together, for they will give it a sufficient stiffening.

Of puff paste.

Now for the making of puff paste of the best kind, you shall take the finest wheat flower after it hath been a little baked in a pot in the oven, and blend it well with egges, whites and yolkes all together, and after the paste is well kneaded, roule out a part thereof as thin as you please, and then spread cold sweet butter over the same, then upon the same butter role another leaf of the paste as before; and spread it with butter also, and thus role leaf upon leaf with butter between, till it be as thick as you think good: and with it either cover any bak't meate, or make paste for Venison, Florentine, Tart, or what dish else you please, and so bake it: there be some that to this paste use sugar but it is certaine, it will hinder the rising thereof, and therefore, when your puff paste is bak't, you shall dissolve Sugar into Rose-water, and drop it into the paste as much as it will by any means receive, and then set it a little while in the Oven after, and it will be sweet enough.

Of baking red Deer, or Fallow, or any thing to keep cold.

When you bake red Deer, you shall first parboyl it, and take out the bones, then you shall, if it be lean, lard it; if fat, save the charge: then put it into a presse to squeeze out the blood; then

then for a night lay it in a meat sauce made of Vinegar, small drink and salt; and then taking it forth, season it well with Pepper finely beaten, and salt well mixt together, and see that you lay good store thereof, both upon and in every open and hollow place of the Venison, but by no means cut any slashes to put in the Pepper, for it will of it self sink fast enough into the flesh, and be more pleasant in the eating. Then having raised the Coffin, lay in the bottom a thick course of butter, then lay the flesh thereon, and cover it all over with butter, and so bake it as much as if you did bake brown bread, then when you draw it, melt more butter with three or foure spoonfulls of Vinegar, and twice so much Claret Wine, and at a vent hole on the Toppe of the lidde, poure in the same, till it can receive no more, and so let it stand and coole, and in this sort, you may bake Fallow Deer, or Swanne, or whatsoever else you please to keep cold, the meate sauce only being left out, which is onely proper to Red Deer. And if to your meat sauce, you adde a little Turnesole, and therein steep Beef, and Ransme mutton: you may also in the same manner take the first for Red Deer Venison, and the latter for Fallow, and a very good judgement shall not be able to say otherwise, then that it is of it selfe perfect Venison, both in Taste, Colour, and the manner of cutting.

To bake beef
or mutton for
Venison.

To bake an excellent Custard or Dowser: you shall take good store of egges, and putting away one quarter of the whites, beat them exceeding well in a bason, and then mixe with them the sweetest and thickest cream you can get, for if it be any thing thinne, the Custard will be wheyish: then season it with salt, sugar, cinamon, cloves, mace, and a little Nutmeg, which done, raise your coffins of good Tough, wheat paste, being the second sort before spoken of, and if you please raise it in pretty works or angular formes, which you may do by fixing the upper part of the crust to the nether with the yolks of egges: then when the coffins are ready, strow the bottomes over a good thicknesse with currants and sugar, then set them into the Oven, and fill them up with the confection before blended, and so drawing them, adorne all the Tops with carraway Cumfers, and slices of Date pickt right up; and so

To bake a
Custard or
Dowser.

serve them up to the Table. To prevent the wheyishness of the Custard, dissolve into the first confection a little ling-glasse and all will be firm.

To bake an Olive-pye.

To make an excellent olive Pye: take sweet hearbs, as Violet leaves, Strawberry leaves, Spinage, Succory, Endive, Tyme and Sorrel, and chop them as small as may be, and if there be a Scallion or two amongst them it will give the better taste, then take the yolks of hard Eggs, with Currants, Cinamon, Clove, and Mace, and chop them among the hearbs also: then having cut out long Olives of a leg of Veal, roule up more than three parts of the hearbs so mixed within the Olives, together with a good deal of sweet butter; then having raised your crust of the finest and best paste, strow in the bottom the remainder of the hearbs, with a few great Raisins, having the stones pickt out, then put in the Olives, and cover them with great Raisins, and a few Prunes: then over all lay good store of butter, and so bake them, then being sufficiently bak't, take Claret Wine, Sugar, Cinamon, and two or three spoonfulls of Wine Vinegar, and boyl them together, and then drawing the Pye, at a vent in the Top of the lid, put in the sauce, and then set it into the Oven again a little space, and so serve it forth.

To bake a Marrow-bone pye.

To bake the best Marrow bone-pye; after you have mixt the crusts of the best sort of paste, and raised the coffin in such a manner as you please; you shall first in the bottome thereof, lay a course of marrow of Beefe, mixt with Currants: then upon it a lay of the soales of Artichocks, after they have been boyled, and are divided from the Thistle; then cover them over with marrow, Currants, and great Raisins, the stones pickt out; then lay a course of Potatoes, cut in thick slices, after they have been boyled soft, and are clean pil'd; then cover them with Marrow, Currants, great Raisins, Sugar, and Cinamon, then lay a layer of candied Eringo roots mixt very thick with the slices of Dates; then cover it with Marrow, Currants, great Raisins, Sugar, Cinamon, and Dates, with a few Damask prunes, and so bake it: and after it is bak't powre into it, as long as it will receive it, White Wine, Rose-water, Sugar, Cinamon, and Vinegar mixt together, and candye
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all the cover with Rose-water and Sugar only, and so set it into the Oven a little, and serve it forth.

To bake a Chicken pye, after you have trust your Chickens, To bake a then broken their legges and breast bones, and raised your crust chicken pye. of the best paste, you shall lay them in the coffin close together, with their bodyes full of butter: then lay upon them, and underneath them Currants, great Raisins, Prunes, Cinamon, Sugar, whole Mice, and Salt: then cover all with great store of Butter, and so bake it: after pour into it the same liquor you did in your Marrow-bone pye, with yolkes of two or three Egges beaten amongst it, and so serve it forth.

To make good Red Deer Venison of Hares, take a Hare Additions to or two or three, as you can or please, and pick all the flesh the pastry Venison or hares. from the bones; then put it into a mortar, either of wood or stone, and with a wooden pestle let a strong person beat it exceedingly, and ever as it is beaten, let one sprinkle in some Vinegar, and some Salt: then when it is sufficiently beaten, take it out of the mortar, and put it into boyling water. and parboyl it: when it is parboyl'd, take it and lay it on a Table in a round lump, and lay a board over it: and with weights press it as hard as may be: then the water being prest out of it, season it well with Pepper and Salt: then lard it with the fat of Bacon so thick as may be, then bake it as you bake other Red Deer, which is formerly declared.

To bake a Hare and pick off all the flesh from the bones, and To bake a onely reserve the head, then parboyl it well: which done, take hare pye. it out and let it cool, as soon as it is cold, take at least a pound and half of Raisins of the Sunne, and take out the stones, then mixe them with a good quantity of Mutton suet, and with a sharp shredding-knife shred it as small as you would doe for a Chewet; then put to it Currants, and whole Raisins, Cloves and Mace, Cinamon and Salt: then having raised the Coffin long-wise to the proportion of a Hare, first lay in the head, and then the aforesaid meat, and lay the meat in the true proportion of a Hare, with neck, shoulders, and legges, and then cover the coffin, and bake it as other bak'd meates of that nature.

A Gammon
of Bacon pic.

Take a Gammon of Bacon, and onely wash it cleane, and then boyl it on a soft gentle fire, till it be boyl'd as tender as is possible, ever and anon skimming it clean, that by all means it may boyl white: then take off the scum, and farse it very well with all manner of sweet and pleasant farsing herbs; then strow store of Pepper over it, and prick it thick with cloves; then lay it into a coffin made of the same proportion, and lay good store of Butter round about it, and upon it, and strow Pepper upon the Butter, that as it melts, the Pepper may fall upon the Bacon; then cover it, and make the proportion of a Pigs Head in paste upon it, and then bake it as you make red deer, or things of the like nature, only the Paste would be of Wheat-meal.

A Herring pye.

Take white pickled Herrings of one nights watering, and boyl them a little, then take off the skin, and take onely the backs of them, and pick the fish clean from the bones; then take good store of Raisins of the Sun, and stone them; and put them to the fish; then take a Warden or two, and pare it, and slice it in small slices from the core, and put it likewise to the fish; then with a very sharp shredding knife shred all as small and fine as may be: then put to it good store of Currants, Sugar, Cinamon, slic't Dates, and so put it into the coffin, with good store of very sweet Butter, and so cover it, and leave onely a round vent-hole on the Top of the lid, and so bake it like pies of that nature: When it is sufficiently bak't; draw it out, and take Claret Wine, and a little Verjuice, Sugar, Cinamon, and sweet Butter, and boyl them together: then put it in at the vent-hole, and shake the pye a little, and put it againe into the Oven for a little space, and so serve it up, the lid being candied over with Sugar, and the sides of the dish trimmed with Sugar.

A Ling pic.

Take the jole of the best Ling, that is not much watered, and is well sodden and cold; but whilst it is hot, take off the skin, and pare it clean underneath, and pick out the bones clean from the fish: then cut it into grosse bits, and let it lye; then take the yolks of a dozen Eggs boild exceeding hard, and put them to the Fish and shred all together as small as is possible. then take all manner of the best and finest pot-herbs, and chop them wonderfull
small

small, and mix them also with the fish, then season it with Pepper, Cloves, and Mace, and so lay it into a coffin with great store of sweet butter, so as it may swim therein, and then cover it, and leave a vent-hole open in the Top, and when it is baked, draw it, and take Verjuice, sugar, cinamon, and butter, and boyl them together; and first with a feather annoint all the lid over with that liquor, and then scrape good store of sugar upon it; then pour the rest of the liquor in at the vent-hole, and then set it into the Oven again for a very little space, and then serve it up as pyes of the same nature, and both these pyes of Fish before rehearsed, are extraordinary and speciall Lenten dishes.

Take a pint of the sweetest and thickest creame that can be gotten, and set it on the fire in a very clean scowred skillet, and put into it Sugar, Cinamon, and a Nutmegge cut into four quarters, and so boyl it well: then take the yolkes of soure Egges, and take off the slimes, and beat them well with a little sweet Cream, then take the foure quarters of the Nutmeg out of the creame, then put in the egges, and stirre it exceedingly till it be thick: then take a fine Manchet, and cut it into thinne shivers, as much as will cover a dish bottom, and holding it in your hand, pour half the Creame into the dish: then lay your bread over it, and cover the bread with the rest of the creame, and so let it stand till it be cold: then strew it over with Caraway cornets, and pick up some Cinamon confets, and some slic't Dates; or for want thereof, scrape all over it some Sugar, and trim the sides of the dish with Sugar, and so serve it up.

Take a pint of the best and thickest Creame, and set it on the fire in a cleane skillet, and put into it Sugar, Cinamon, and a Nutmegge cut into four quarters, and so boyl it well, then put it into the dish you intend to serve it in, and let it stand to cool till it be more than luke-warme: then put in a spoonfull of the best earning, and stir it well about, and so let it stand till it be cold: and then strow Sugar upon it, and so serve it up, and this you may serve either in dish, glasse, or other plate.

Take Calves feet well boyl'd, and pick all the meat from A calves foot the bones: then being cold, shred it as small as you can; then pye.

season it with Cloves and Mace, and put in good store of Currants, Raisins, and Prunes, then put it into the coffin with good store of sweet Butter : then break in whole sticks of Cinamon, and a Nutmegge slic'd into four quarters, and season it before with Salt : then close up the coffin, and onely leave a vent-hole ; When it is bak't, draw it, and at the vent-hole put in the same liquor you put in the Ling-pye, and trim the lid after the same manner, and so serve it up.

Oyster pye.

Take of the greatest Oysters drawn from the shels, and parboyl them in Verjuyce : then put them into a Cullander, and let all the moisture run from them, till they be as dry as possible : then raise up the coffin of the pye, and lay them in ; then put to them good store of currants, and fine powdered Sugar, with whole Mace, whole Cloves, whole Cinamon, and Nutmegg slic'd, Dates cut, and good store of sweet butter : then cover it, and onely leave a vent-hole : when it is bak't, then draw it, and take White Wine, and white wine Vineger, Sugar, Cinamon, and sweet butter, and melt it together : then first trim the lid therewith, and candy it with Sugar ; then powre the rest in at the vent hole, and shake it well, and so set it into the Oven again for a little space, and so serve it up, the dish edges trim'd with Sugar. Now some use to put to this Pye Onions sliced and shred, but that is referred to discretion, and to the pleasure of the Taste.

To recover
Venison that
is rainted.

Take strong Ale, and put to it wine Vinegar as much as will make it sharp ; then set it on the fire, and boyl it well and skum it, and make of it a strong brine with bay salt or other salt ; then take it off, and let it stand till it be cold, then put your Venison into it, and let it lye in it full twelve houres : then take it out from that meer sawce, and presse it well, then parboyl it, and season it with Pepper, and Salt, and bake it, as hath been before shewed in this Chapter.

A chawet pye.

Take the brawns and the wings of Capons and Chickens after they have been roasted, and pull away the skin ; then shred them with Mutton-suet very small ; then season it with Cloves, Mace, Cynamon, Sugar, and Salt : then put to Raisins of the Sun, and Currants, and slic'd Dates, and Orange pill, and being well mixt together, put it into small coffins made for

for the purpose, and strow on the Top of them good store of Carraway comfets: then cover them, and bake them with a gentle heat: and these Chewets you may also make of roasted Veal, seasoned as before shewed, and of all sorts the loyn is the best.

Take a Legge of Mutton, and cut the best of the flesh from A mutton pie. the bone, and parboyl it well: then put to it three pound of the best Mutton suet, and shred it very small; then spread it abroad, and season it with Salt, Cloves, and Mace: then put in good store of Currants, great Raisins and Prunes clean washed, and picked, a few Dates sliced, and some Orange pills sliced; then being all well mixt together, put into a coffin, or into divers coffins, and so bake them: and when they are served up, open the lids, and strow store of Sugar on the Top of the meat, and upon the lid. And in this sort, you may also bake Beef or Veal, onely the Beef would not be parboyl'd, and the Veal will ask a double quantity of Suet.

Take the fairest and best Pippins, and pare them, and make a A Pippin pie. hole in the Top of them; then prick in each hole a Clove or two, then put them into the coffin, then break in whole sticks of Cynamon, and slices of Orenge-pills, and Dates, and on the Top of every Pippin, a little piece of sweet Butter; then fill the coffin, and cover the Pippins over with Sugar: then close up the Pye, and bake it, as you bake Pyes of the like nature: and when it is bak'd, annoint the lidde over with store of sweet butter, and then strow Sugar upon it a good thicknesse, and set it into the Oven again for a little space, as while the meat is in dishing up, and then serve it.

Take of the fairest and best Wardens, and pare them, and A warden pie. take out the hard cores on the Top, and cut the sharp ends at the bottom flat; then boyle them in white Wine and Sugar, untill the sirrup grow thick: then take the Wardens from the sirrup in a cleare dish, and let them cool, then set them into the coffin, and prick cloves in the Tops, with whole sticks of Cynamon, and great store of Sugar as for Pippins: then cover it, and onely reserve a vent-hole, so set it in the Oven and bake it; when it is bak'd, draw it forth, and take the first sirrup in which

which the Wardens were boyld, and taste it, and if it be not sweet enough, then put in more Sugar, and some Rose-water, and boyl it againe a little: then pour it in at the vent-hole, and shut the pye well: then take sweet Butter, and Rose-water melted, and with it annoint the pye-lid all over, and then strow on it store of Sugar, and so set it into the Oven againe a little space, and then serve it up: and in this manner you may also bake Quinces.

To preserve
Quinces to
bake all the
year.

Take the best and sweetest Wort, and put to it good store of Sugar: then pare and cover the Quinces clean, and put them therein, and boyl them till they grow tender: then take out the quinces and let them cool, and let the pickle in which they were boyled stand to coole also: then straine it thorow a rauge or sieve, then put the Quinces into a sweet earthen pot: then powr the pickle or sirrop unto them, so as all the Quinces may be quite covered all over: then stop up the pot close, and set it in a dry place, and once in six or seven weekes look upon it: and if you see it shrink, or do begin to hoar or mould, then powr out the pickle or sirrop, and renewing it, boyl it over againe, and as before put it to the Quinces being cold, and thus you may preserve them for the use of baking, or otherwise, all the year.

A Pippin tart.

Take Pippins of the fairest, and pare them, and then divide them just in halves, and take out the cores cleane: then having round the coffin flat, and raised up a small verdge of an inch, or more high, lay in the Pippins with the hollow side downward, as close one to another as may be: then lay here and there a Clove, and here and there a whole stick of Cinamon, and a little bit of Butter: then cover all clean over with Sugar, and so cover the coffin, and bake it according to the manner of Tarts, and when it is bak't, then draw it out, and having boyled butter and Rose-water together, annoint all the lid over therewith, and then scrape or strow on it good store of Sugar, and so set it in the oven againe, and after serve it up.

A Codlin tart.

Take green Apples from the Tree, and coddle them in scalding water without breaking: then pill the thin skinne from them and so divide them in halves, and cut out the cores, and so

lay them into the coffin ; and do in every thing as you did in the Pippin Tart ; and before you cover it, when the Sugar is cast in, see you sprinkle upon it good store of Rose-water, then close it, and do as before shewed.

Take Codlins as before said, and pill them and divide them in halves, and core them, and lay a lear thereof in the bottom of the pye : then scatter here and there a clove, and here and there a piece of whole Cinamon, then cover them all over with Sugar, then lay another lear of Codlings, and do as before said, and so another, till the coffin be all filled ; then cover all with Sugar, and here and there a Clove and a Cinamon-stick, and if you will a slic't Orange pill and a Date ; then cover it, and bake it as the Pies of that nature : When it is bak't, draw it out of the Oven, and take of the thickest and best Cream, with good store of Sugar, and give it one boyl or two on the fire, then open the pye, and put the Cream therein, and mash the Codlins all about ; then cover it, and having trimm'd the lid, (as was before shewed in the like Pies and Tarts) set it into the Oven again for half an hour, and so serve it forth.

Take the fairest Cherries you can get, and pick them clean from leaves and stalks : then spread out your coffin as for your Pippin Tart, and cover the bottom with sugar, then cover the sugar all over with Cherries, then cover those Cherries with sugar, some sticks of Cinamon, and here and there a Clove ; then lay in more Cherries, and so more sugar, Cinamon and Cloves, till the coffin be filled up : then cover it, and bake it in all points, as the codlin and pippin Tart, and so serve it : and in the same manner you may make Tarts of Gooseberries, Strawberries, Raspberries, Bilberries, or any other Berry wharsoever.

Take Rice that is clean pick'd, and boyl it in sweet Cream, till it be very soft ; then let it stand and cool, and put into it good store of Cinamon and Sugar, and the yolk's of a couple of Eggs and some Currants, stir and beat all well together, then having made the coffin in the manner before said for other Tarts, rub the Rice therein, and spread it all over the coffin : then break many little bits of sweet Butter upon it all over, and scrape some Sugar over it also ; then cover the Tart, and bake it, and trim it in all points as hath been before shewed, and so serve it up.

Take

A Florentine. Take the Kidneys of Veal after it hath been well roasted, and is cold: then shred it as fine as is possible; then take all sorts of sweet Pot herbs, or farcing herbs, which have no bitter or strong tast, and chop them as small as may be, and putting the Veal into a large dish put the herbs unto it, and good store of clean washt Currants, Sugar, Cinamon, the yolkes of foure egges, a little sweet Creame warm'd, and the fine grated crummes of a half penny loafe, and salt, and mixe all exceedingly together: then take a deep pewter dish, and in it lay your paste very thin rowled out, which paste you must mingle thus: Take of the finest Wheat flower a quart, and a quarter so much Sugar, and a little Cinamon; then breake into it a couple of Egges, then take sweet cream and butter melted on the fire, and with it knead the paste, and as was before said, having spread butter all about the dishes sides, then put in the Veal, and breake pieces of sweet butter upon it, and scrape Sugar over it; then rowl out another paste reasonable thicke, and with it cover the dish all over, closing the two pastes with the beaten whites of Egges very fast together, then with your knife cut the lid into diverse pretty workes, according to your fancy then set it in the Oven and bake it with Pyes and Tarts of like nature; when it is bak't, draw it and trimme the lid with sugar, as hath been shewed in Tarts, and so serve it up with your second course.

A prune tart. Take of the fairest damask Prunes you can get, and put them in a clean pipkin with fair Water, Sugar, unbruised Cinamon, and a branch or two of Rosemary, and if you have bread to bake, stew them in the Oven with your bread: if otherwise, stew them on the fire: when they are stewed; then bruise them all to mash in their sirrup, and strain them into a clean dish; then boyl it over againe with Sugar, Cinamon, and Rose-water, till it be as thick as mar-melad: then set it to cool; then make a reasonable Tough paste with fine flower, Water, and a little butter, and rowl it out very thin: then having patterns of paper cut into divers proportions, as Bees, Birds, Armes Knots, Flowers and such like, Lay the patterns on the past, and so cut them accordingly: then with your finger pinch up the edges of the paste, and set the work in
good

good proportion : then prick it well all over for rising , and set it on a clean sheet of large paper , and so set it into the Oven. and bake it hard ; then draw it and set it by to coole ; and thus you may do by a whole Oven full at one time , as your occasion of experience is : then against the time of service comes, take of the conffection of Prunes before reheated , and with your Knife or a spoon , fill the coffin according to the thicknesse of the verge , then strow it over with carraway cumfets , and prick long cumfets upright in it , and so taking the paper from the bottom , serve it on a plate in a dish or charger , according to the bignesse of the Tart, and at the second course ; and this Tart carryeth the colour black.

Take Apples and pare them , and slice them thin from the core into a Pipkin with White Wine, good store of Sugar, Cinamon, a few Saunders and Rose-water , and so boyl it till it be thick : then cool it and strain it and beat it very well together with a spoon , then put in into the coffin as you did the Pruén Tart , and adorn it also in the same manner, and this Tart you may fill thicker or thinner , as you please to raise the edge of the coffin , and it carrieth colour red. Apple-Tart.

Take good store of Spinage , and boyl it in a Pipkin, with White-Wine , till it be very soft as pap : then take it and strain it well into a pewter dish , not leaving any part unstrained : then put to it Rose-water , great store of Sugar and cinamon, and boyl it till it be as thick as Marmalad , then let it coole, and after fill your Coffin and adorn it , and serve it in all points as you did your Pruén-Tart ; and this carrieth the colour green. A Spinage Tart.

Take the yolks of Egges and break away the films , and beat them well with a little Cream , then take of the sweetest and thickest cream that can be got , and set it on the fire in a clean skillet , and put into it Sugar, Cinamon, Rose-water, and then boyl it well : when it is boyld , and still boyling, stir it well, and as you stir it put egges , and so boyl it till it curdle : then take it from the fire and put it into a strainer, and first let the thin whey-run away into a by'dish , then strain A yellow tart.

strain the rest very well, and beat it well with a spoon, and so put it into the Tart Coffin, and adorn it as you do your Pruin Tart, and so serve it, and this carrieth the colour yellow.

A white Tart. Take the whites of egges and beat them with Rose-water, and a little sweet cream, then set on the fire good thick sweet cream, and put into it sugar, cinnamon, rose-water, and boyl it well, and as it boyles stir it exceedingly, and in the stirring put in the whites of eggs, then boyl it till it curde, and after do in all things as you did to the yellow Tart; and this carrieth the colour white, and it is a very pure white, and therefore would be adomed with Red carraway Comfets, and as this, so with blanched almonds like white Tarts, and full as pure. Now you may if you please, put all these severall colours, and severall stuffs into one Tart, as thus; If the Tart be in the proportion of a beast, the body may be of one colour, the eyes of another, the Teeth of another, the Talents of another: and of birds, the body of one colour, the eyes of another, the legs of another, and every feather in the wings of a severall colour, according to fancy: and so likewise in Armes, the field one colour, the charge of another, according to the form of the Coat armour; as for Mantles, Trails, and devices about arms, they may be set out with severall colours of preserves, conserves, marmalads and good in cakes, and as you shall find occasion or invention; and so likewise of knots, one tayl of one colour, and another of another, and so of as many as you please.

A hearb Tart. Take Sorrell, Spinage, Parsly, and boyl them in water till they be very soft as pap, then take them up and presse the water clean from them, then take good store of yolks of egges boild very hard, and chopping them with the hearbs exceeding small, then put in good store of currants, sugar, and cinnamon, and stir all well together; then put them into a deep Tart Coffin with good store of sweet batter, and cover it and bake it like a Pippin Tart, and adorn the lid after the baking in that manner also, and so serve it up.

To bake a pudding pye. Take a quart of the best cream, and set it on the fire, and slice a loaf of the lightest white bread into thin slices, and put into it, and let it stand on the fire till the milk begin to rise; then

then take it off, and put it into a basin, and let it stand till it be cold, then put in the yolks of four eggs, and two whites, good store of currants, sugar, Cinamon, Cloves, Mace, and plenty of Sheeps tuet finely shued, and a good season of Salt, then trime your pot very well round about with butter, and so put in your pudding, and bake it sufficiently, then when you serve it, strow Sugar upon it.

Take the best and sweetest cream; and boyl it with good store of Sugar, and Cinamon, and a little Rose-water, then take it from the fire and put it into clean pickt Rice, but not so much as to make it thick, and let it steep therein till it be cold, then put in the yolks of six egges and two whites, Currants, Cinamon, Sugar, and Rose-water. and salt, then put it into a pan or pot as thin as it were a custard; and so bake it, and serve it in the pot it is baked in, trimming the top with Sugar or Comfits.

There are a World of other bake Meats and Pies, but for as much as whosoever can doe these, may doe all the rest, because herein is contained all the art of Reasonings, I will trouble you with no further repetitions; but proceed to the manner of making Banquetting stuff, and con-cited dishes, with other pretty and curious secrets, necessary for the understanding of our English House-wife: for albeit, they are not of generall use, yet in their due times, they are so needfull for adoration, that whosoever is ignorant therein, is lame, and but the halfe part of a House-wife.

To make past of quinces, first boyl your quinces whole, and when they are soft pare them, and cut the quince from the core; then take the finest Sugar you can get, finely beaten and searfed, and put in a little Rose water, and boyl it together till it be stiffe enough to mould, and when it is cold, then role it: and print it: a pound of quinces will take a pound of Sugar, or near thereabouts.

To make thinne quince cakes, take your quince when it is boild soft as before said, and dry it upon a pewter plate, with soft heat, and be ever stirring of it with a slice till it be hard, then take searfed sugar quantity for quantity, and strow it into the quince, as you beat it in a wooden or stone mortar: and so roule them thin and print them.

To

To preserve
quinces.

To preserve quinces, first pare your quinces, and take out the cores, and boyl the cores and parings altogether in fair water, and when they begin to be soft, take them out and strain your liquor, and put the weight of your quinces in Sugar, and boyl the quinces in the sirrop till they be tender: then take them up and boyl the sirrup till it be thick. If you will have your quinces red, cover them in the boyling; and if you will have them white do not cover them.

To make
Ipocras.

To make Ipocras, take a pottle of wine, two ounces of good cinamon, half an ounce of ginger, nine cloves, and six pepper corns, and a nutmeg, and bruise them and put them into the wine with some Rosemary flowers, and so let them steep all night, and then put in Sugar a pound at least, and when it is well settled, let it run through a wollen bag made for that purpose: thus if your Wine be claret, the Ipocras will be red; if white, then of that colour also.

To make
jelly.

To make the best jelly, take Calves feet and wash them, and scald off the hair as clean as you can get it: then split them and take out the fat and lay them in water and shift them, then bruise them in fair water untill it will jelly, which you shall know by now and then cooling a spoonfull of the broth; when it will jelly. then strain it, and when it is cold, then put in a pint of Sack and whole Cinamon, and Sugar and a little Rose-water, and boyl all well together again. Then beat the white of an Egge and put into it, and let it have one boyl more: then put in a branch of Rosemary into the bottom of your jelly bag, and let it run through once or twice, and if you will have it coloured, then put in a little Townfall. Also if you want calves feet, you may make as good Jelly if you take the like, quantity of Ising-glass, and so use no calves feet at all.

To make
Leach.

To make the best Leech take Isinglasse, and lay it two hours in water, and shift it and boyl it in fair water, and let it cool, Then take Almonds and lay them in cold water till they will blanch; and then stamp them and put to new milk, and strain them and put in whole Mace and Ginger sliced, and boyl them till it taste well of the spice: then put in your Isingglass and Sugar, and a little Rose-water, and then let them all run through a strainer.

To make gin-
ger brad.

Take Claret Wine, and colour it with Townfall, and put in
sugar

Suger, and set it to the fire ; then take wheat breid finely grated and sifted, and Lycoras, Anniseeds, Ginger and Cinamon beaten very small and searfed ; and put your bread and your spice together, and put them into the wine and boyl it, and stir it till it be thick, then mould it and print it at your pleasure, and let it stand neither too moist nor too warm.

To make red Marmalade of quinces, take a pound of Quinces and cut them in halles, and take out the cores, and pare them; Marmalade of Quinces, red. then take a pound of Suger, and a quart of fair water, and put them all into a pan, and let them boyl with a soft fire, and sometimes turn them and keep them covered with a pewter dish, so that the steam or ayr may come a little out : the longer they are in boyling, the better colour they will have : and when they be soft take a Knife, and cut them cross upon the top, it will make the sirrop go through that they may be all of the like colour : then str a little of your sirrop to cool, and when it beginneth to be thick, then break your quinces with a slice or a spoon, so small as you can in the pan, and then strow a little fine suger in your boxes bottome, and so put it up.

To make white Marmalade, you must in all points use your quinces as is before said ; only you must take but a pint of wa- Marmalade white. ter to a pound of quinces, and a pound of Suger, and boyl them as fast as you can, and cover them not at all.

To make the best Jumbals, take the whites of three Eggs, To make jumbals. and beat them well, and take off the froth ; then take a little milke bals. and a pound of fine wheat flowre and suger together finely sifted, and a few Anniseeds well rub'd and dryed, and then work all together as stiff as you can work it, and so make them in what forms you please, and bake them in a soft oven upon white papers.

To make Bisket bread, take a pound of fine flowre, and a To make bisket bread. pound of suger finely beaten and searfed, and mixe them together, then take eight eggs, & put four yolks, and beat them very well together ; then strow in your flowr & suger as you are beating of it, by a little at once, it will take very near an hours beating : then take half an ounce of Anniseeds and Coriander seeds, and let them be dryed and rub'd very clean, and put them in ; then rub your bisket pans with cold sweet butter as thin as you can, and so put it in, and bake it an Oven : but if you would

have thinne cakes, then take fruit dishes, and rub them in like sort with butter, and so bake your Cakes on them, and when they are almost baked, turn them, and thrust them down close with your hand. Some to this Bisket bread will adde a little Cream, and it is not amiss; but excellent good also.

To make finer jumbals.

To make Jumbals more fine and curious than the former, and neerer to the taste of the Macbroen, take a pound of Sugar, beat it fine, then take as much fine wheat flowre, and mixe them together, then take two whites and one yolk of an Egge, half a quarter of a pound of blanched Almonds: then beat them very fine altogether, with half a dish of sweet butter, and a spoonfull of Rose water, and so work it with a little Cream till it come to a very stiff paste, then roul them forth as you please: and hereto you shall also, if you please, adde a few dried Anniseeds finely rubbed, and strewed into the paste, and also Coniander seeds

To make dry Suger-leach.

To make dry Suger leach, blaunch your Almonds, and heat them with a little Rose water, and the white of one egge, and you must beat it with a great deal of Suger, and work it as you would work a piece of past: then roul it, and print it as you did other things, only be sure to strew Suger in the print for fear of cleaving to.

To make leach Lumbard.

To make Leach Lumbard, take half a pound of blanched Almonds, two ounces of Cinamon beaten and searfed, halfe a pound of Suger; then beat your Almonds, and strew in your Suger and Cinamon till it come to a paste, then roul it, and print it, as aforesaid.

To make fresh Cheese.

To make an Excellent fresh Cheese, take a pottle of milk as it comes from the Cow, and a pint of Cream: then take a spoonfull of Runnet or Earning, and put it unto it, and let it stand two hours; then stirre it up, and put it into a fine cloth, and let the Whey drain from it: then put it into a bowl, and take the yolk of an Egge, a spoonfull of Rose water, & bray them together with a very little Salt, with Suger & Nittmeggs, & when all these are brayed together, & searfed, mixe it with the cund, & then put it in the Cheese fat with a very fine cloth.

How to make coorse Ginger bread.

To make coorse Ginger bread, take a quart of honey, and set it on the coals and refine it: then take a penny worth of Ginger,

Ginger, as much Pepper, as much Lycoras and a quarter of pound of Anniseeds, and a penny worth of Saunders: all these must be beaten and searfed, and so put into the Hony; then put in a quarter of a pint of Claret wine, or old Ale: then take three penny manchets finely grated, and strow it amongst the rest, and stir it till it come to a stiff paste, and then make it into cakes, and dry them gently.

To make ordinary Quince cakes, take a good piece of a preserved quince, and beat it in a mortar, and work it up into a very stiff paste with fine sifted sugar; then print it, and dry them gently. How to make Quince cakes ordinary.

To make most artificial Cinamon sticks, take an ounce of Cinamon and pound it, and half a pound of Sugar: then take some gum Dragon, and put it in steep in Rose water: then take thereof to the quantity of a Hazl nut, and work it out and print it, and roll it in form of a Cinamon stick. How to make Cinamon sticks.

To make Cinamon water, take a pottle of the best Ale and a pottle of Sack-lees, a pound of Cinamon sliced fine, and put them together, and let them stand two dayes; then distill them in a Limbeck or glasse still. How to make Cinamon water.

To make wormwood water, take two gallons of good Ale, a pound of Anniseeds, half a pound of Lycoras. & beat them very fine; & then take two good handfulls of the crops of Wormwood and put them into the Ale, and let them stand all night, and then distill them in a Limbeck with a moderate fire. To make Worm wood water.

To make sweet water of the best kind, take a thousand musk Roses, two good handfulls of Lavender tops, a three penny weight of Mice, two ounces of Cloves bruised, a quart of running water: put a little water into the bottome of an earthen pot, and then put in your Roses and Lavender, with the spices by little and little, and in the putting in, alwaies knead them down with your fist, and so continue it until you have wrought up all your Roses and Lavender, and in the working between put in alwaies a little of your water; then stop your pot close and let it stand in four dayes, in which time, every morning and evening put in your hand, and pull from the bottome of your pot the said Roses, working it for a time, and then distill it, and hang in the glass of water a grain or two of Musk wrapt in a piece of Sarcenet or fine cloth. To make Sweet-water.

Another way. Others to make sweet Water, take of Ireos two ounces, of Calamus half an ounce, of Cypress roots half an ounce, of yellow Sanders nine drams, of Cloves bruised one ounce, of Storax and Calamint one ounce, and of Musk twelve grains, and infusing all these in Rose-water distill it.

To make
Date Leach

To make an Excellent Date-Leach, take Dates, and take out the stones, and the white rind, and beat them with Sugar, Cinamon and Ginger, very finely; then work it as you would work a peece of paste, and then print them as you please.

To make Su-
ger plate.

To make a kind of Sugar plate, take Gum Dragon, and lay it in Rose water two dayes: then take the powder of fair Heppes & Sugar, and the juyce of an Orange, beat all these together in a mortar, then take it out, and work it with your hand and print it at your pleasure.

To make Spice
Cakes.

To make Excellent Spice Cakes, take half a peck of very fine Wheat-flower, take almost one pound of sweet butter, and some good milk and cream mixt together, set it on the fire, and put in your butter, and a good deal of Sugar, and let it melt together: then strain Saffron into your milk a good quantity: then take seven or eight spoonfulls of good Alebarn, and eight eggs with two yolks, and mixe them together, then put your milk to it when it is somewhat cold, and into your flowre put salt, Anniseeds bruised, Cloves, and Mace, and a good deal of Cinamon; then work all together good and stiff, that you need not work in any flowre after, then put in a little Rose water cold, then rubbe it well in the thing you knead it in and work it thoroughly: if it be not sweet enough, scrape in a little more sugar, and pull it all in pieces, and hurl in a good quantity of currants, and so work all together again, and bake your cake as you see cause, in a gentle warm Oven.

To make Ban-
bury cakes.

To make a very good Banbury Cake, take four pounds of currants, and wash and pick them very clean, and dry them in a cloth: then take three Eggs, and put away one yolk, and beat them and strain them with Barm, putting thereto cloves, Mace, Cinamon, and Nutmeggs. then take a pint of cream, and as much mornings milk, and set it on the fire till the cold be taken away; then take flowre, and put in good store of cold

cold butter and sugar, then put in your egges, barmie, and meale, and work them all together an hour or more; then save a part of the paste, and the rest break in pieces, and work in your Currants; which done, mould your Cake of what quantity you please, and then with that paste which hath not any Currants, cover it very thin, both underneath, and aloft. And so bake it according to the bignesse.

To make the best March-pane, take the best Jordan Almonds, and blanch them in warm water, then put them in a stone mortar, and with a wooden pestell beat them to pap, then take of the finest refined Sugar, well searst, and with it Damaske Rose-water, beat it to a good stiffe paste, allowing almost to every Jordan Almond, three spoonfulls of Sugar: To make the best March-pane.

then when it is brought thus to a paste, lay it upon a fair Table, and strowing searst-sugar under it, mould it like heaven, then with a roling pin role it forth, and lay it upon wafers, wash it with Rose-water; then pinch it about the sides, and put it into what form you please; then strow searst Sugar all over it, which done, wash it over with Rose-water and Sugar mixt together, for that will make the Ice; then adorn it with Confects, gilding, or whatsoever devices you please, and so set it into a hot stove, and there bake it crispy, and serve it forth. Some use to mixe with the paste, Cinamon, and Ginger finely searst, but I referre that to your particular taste.

To make paste of *Genna*, you shall take Quinces after they have been boyld soft, and beat them in a mortar with refined Sugar, Cinamon, and Ginger finely searst, and damask Rose-water, till it come to a stiffe past; and role it forth, and print it, and so bake it in a stove: and in this sort, you may make paste of Pears, Apples, Wardens, Plummes of all kinds, Cherries, Barberries, or what other fruits you please. To make paste of *Genna*, or any other paste.

To make conserve of any fruit you please, you shall take the fruit you intend to make conserve of, and if it be stone-fruit, you shall take out the stones: if other fruit, take away the paring and core, and then boyl them in faire running water, to a reasonable height: then draine them from thence, and put them into a fresh vessell with Claret Wine, or White Wine, according to the colour of the fruit: and so boyl them

to a thick pap, all to mashing, breaking, and stirring them together: and then to every pound of pap, put to a pound of sugar, and so stirre them all well together, and being very hot, straine them through faire strainers, and so pot it up.

To make a
conserve of
Flowers.

To make conserve of Flowers, as Roses, Violett, Gilliflowers, and such like; you shall take the flowers from the stalks, and with a pair of sheeres cut away the white ends at the roots thereof, and then put them into a stone mortar, or wooden brake, and there crush, or beat them, till they be come to a soft substance: and then to every pound thereof, take a pound of fine refined sugar, well searst, and beat it all together, till it come to one intire body. and then pot it up, and use it as occasion shall serve.

To make wa-
fers.

To make the best Wafers, take the finest wheat flower you can get, and mixe it with cream, the yolks of egges, Rose-water, Sugar, and Cinamon, till it be a little thicker than Pancake-batter, and then warming your wafer Irons on a charcoal-fire, annoint them first with sweet butter, and then lay on your batter, and presse it, and bake it white or brown at your pleasure.

To make Mar-
malade of O-
ranges.

To make an excellent Marmalade of Oranges, take the Oranges, and with a knife pare off as thin as is possible the uppermost rind of the Orange; yet in such sort, as by no meanes you alter the colour of the Orange: then steep them in faire water, changing the water twice a day, till you find no bitterness of tast therein; then take them forth, and first boyl them in faire running water, and when they are soft, remove them into Rose-water, and boyl them therein till they break: then to every pound of the pulpe, put a pound of refined Sugar, and so having masht, and stirring them all well together, straine it through very fair strainers into boxes, and so use it as you shall see occasion.

Additions to
banqueting-
stuffs.

To make fine
Cakes.

Fine bread.

Take a pottle of fine flower, and a pound of Sugar, a little Mace, and good store of water to mingle the flower into a stiffe paste, and a good season of salt, and so knead it, and role out the cakes thin, and bake them on papers.

Take a quarter of a pound of fine sugar well beaten, and as much

much flower finely bolted, with a quantity of Anniseeds a little bruised. and mingle all together; then take two egges, and beat them very well, whites and all; then put in the mingled stuff aforesaid, and beat all together a good while, then put it into a mould, wiping the bottome ever first with butter, to make it come out easily, and in the baking, turn it once or twice as you shall have occasion, and so serve it whole or in slices at your pleasure.

Take sweet Apples, and stimp them as you do for Cider, then presse them through a bag as you do Verjuyce, then put it into a firkin wherein you will keep your quinces, and then gather your quinces, and wipe them clean, and neither core them nor pare them, but only take the blacks from the Tops, and so put them into the firkin of Cider, and therein you may keep them all the year very fair, and take them not out of the liquor, but as you are ready to use them, whether it be for pyes, or any other purpose, and then pare them, and core them as you think good.

Take a gallon of Claret or White Wine, and put therein four ounces of Ginger, an ounce and a half of Nutmegs, of Cloves one quarter, of Sugar four pound; let all this stand together in a pot at least twelve houres, then take it, and put it into a cleane bagge made for the purpose, so that the Wine may come with good leifure from the spices.

Take quinces and wipe them very cleane, and then core them, and as you core them, put the cores strait into fair water; let the cores and the water boyl, when the water boyleth, put in the quinces unpared, and let them boyl till they be tender, and then take them out, and pare them, and ever as you pare them, put them strait into sugar finely beaten: then take the water they were sodden in, and straine it through a fine cloth, and take as much of the same water as you think will make sirrup enough for the quinces, and put in some of your sugar and let it boyl a while, and then put in your quinces, and let them boyl a while, and turn them, and cast a good deal of Sugar upon them; they must seeth a pace, and ever as you turn them, cover them still with Sugar, till you have bestowed all your sugar; and when you think that your quinces are tender enough, take them forth, and if your sirrup be not stiff enough,

you may seeth it againe after the quinces are forth. To every pound of quinces you must take more than a pound of Sugar, for the more Sugar you take, the fairer your quinces will be; and the better and longer they will be preserved.

Conserve of
Quinces.

Take two gallons of fair water, and set it on the fire, and when it is luke warme, beat the whites of five or six egges, and put them into the water, and stirre it well, and then let the water seeth, and when it riseth up all on a curd, then scumme it off. Take quinces and pare them, and quarter them, and cut out the core: Then take as many pound of your quinces as of your Sugar, and put them into your liquor, and let it boyl till your liquor be as high coloured as French Wine; and when they be very tender, then take a faire new Canvas cloth fair washt, and strain your quinces through it with some of your liquor; (if they will not goe through easily:) then if you will make it very pleasant, take a little Musk, and lay it in Rose-water, and put it thereto, then take and seeth it, untill it be of such substance, that when it is cold, it will cut with a knife; and then put it into a faire boxe, and if you please lay leafe-gold thereon.

 To keep
Quinces all
the year.

Take all the parings of your quinces that you make your conserve withall, & three or four other quinces, and cut them in pieces and boyl the same parings, and the other pieces, in two or three gallons of water, and so let them boyle till all the strength be foddren out of the same quinces and parings, and if any skum arise whilst it boyles, take it away; then let the said water run thorough a strainer into a fair vessell, and set it on the fire again, and take your quinces that you will keep, and wipe them clean, and cut off the uttermost part of the said quinces, and pick out the kernels and cores as clean as you can, and put them into the said liquor, and so let them boyl till they be a little soft, and then take them from the fire, and let them stand till they be cold, then take a little barrel, and put into the said barrel the water that your quinces be foddren in; then take up your quinces with a Ladle, and put them into your barrel, and stop the barrel close, that no aire come into them, till you have fit occasion to use them; and be sure to take such quinces as are neither bruised nor rotten.

Take

Take of the best sugar, and when it is beaten, searfe it very fine, Fine Ginger
Cakes. and of the best Ginger, and Cinamon; then take a little Gumdragon, and lay it in Rose-water all night, then pour the water from it, and put the same with a little white of an egge well beaten into a brass mortar, the sugar, ginger, cinamon, and all together, and beat them together till you may work it like paste; then take it and drive it forth into cakes, and print them, and lay them before the fire, or in a very warm stove to bake. Or otherwise, take Sugar and Ginger, (as is before said) cinamon and gum-dragon excepted, in stead whereof, take onely whites of Eggs, and so do as was before shewen you.

Take curds, the paring of Lemons, of Oranges, or Pomci- To make
Suckets. trons, or indeed any half ripe green fruit, and boyl them till they be tender in sweet wort; then make a sirrop in this sort, take three pound of Sugar, and the whites of four egges, and a gallon of water, then sing and beat the water and the egges together, and then put in your Sugar, and set it on the fire, and let it have an easier fire, and so let it boyl six or seven walmes, and then strain it through a cloth, and set it on again till it fall from the spoon, and then put it into the rinds or fruits.

Take a quart of Honey clarified, and seeth it till it be brown, Course Ginger
bread. and if it be thick, put it to it a dish of water: then take fine crams of white bread grated, and put to it, and stirre it well, and when it is almost cold, put to it the powder of Ginger, Cloves, Cinamon, and a little Licoras and Anniseeds: then knead it, and put it into a mould and print it; some use to put to it also a little Pepper, but that is according unto taste and pleasure.

Dissolve sugar, or sugar-candy in Rose-water, boile it to an To candy any
root, fruits, or
flowers. bright, put in your roots, fruits or flowers, the sirrop being cold, then rest a little; after take them out, and boyl the sirrop again, then put in more roots, &c. then boyl the sirrop the third time to an hardness; putting in more Sugar, but not Rose-water, put in the roots, &c. the sirrop being cold, and let them stand till they candy.

Thus having shewed you how to preserve, conserve, candy, and Ordering of
Banquets. make pasts of all kinds, in which four heads consists the whole Art of banqueting dishes; I will now proceed to the ordering
of

or setting forth of a banquet, wherein you shall observe that March-pans have the first place, the middle place, and last place: your preserved fruits shall be dight up first, your pasts next, your wet suckets after them; then your dried suckets, then your Marmalades, and cotinates, then your comfets of all kinds; Next your Peares, Apples, Wardens, bakt, raw, or roasted, and your Oranges and Lemons sliced; and lastly your Wafer-cakes. Thus you shall order them in the closet, but when they goe to the Table, you shall first send forth a dish made for show only, as Brast, Bird, Fish, Fowl, according to invention: then your March-pane, then preserve'd Fruit, then a Past, then a wet sucket, then a dry sucket, Marmalade, comfets, apples, peares, wardens, Oranges and Lemons sliced, and then wafers, and another dish of preserved fruits, and so consequently all the rest before, no two dishes of one kind, going or standing together, and this will not only appear delicate to the eye, but invite the appetite with the much variety thereof.

Ordering of
great Feasts,
and proportion
of expence

Now we have drawn our *House-wife* into these severall Knowledges of Cookery, in as much as in her is contained all the inward Offices of Household, we will proceed to declare the manner of serving and setting forth of meat for a great Feast, and from it derive meener, making a due proportion of all things; for what avails it our good *House-wife* to be never so skillfull in the parts of Cookery, if she want skill to marshall the dishes, and set every one in his due place, giving precedence according to fashion and custome. It is like to a Fencer leading a band of men in a rout, who knows the use of the weapon, but not how to put men in order. It is then to be understood, that it is the Office of the Clerk of the Kitchen, (whose place our *House-wife* must many times supply) to order the meat at the Drester, and deliver it unto the Sewer, who is to deliver it to the Gentleman, and Yeomen-waiters to bear to the Table. Now because we allow no Officers but our *House-wife*, to whom we only speak in this Book, she shall first marshall her Sallets, delivering the Grand Sallet first, which is evermore compound: then green Sallets, then boyled Sallets, then some smaller compound Sallets. Next unto Sallets, she shall deliver forth all her Fricases, the simple first, as Collops, Rastlers, and such like,

th

then compound Fricases; after them all, her boyled meates in their degre, as simple broths, stewd-broths, and the boylings of sundry Fowles. Next them, all sorts of Rost-meates, of which the greatest first, as chine of Beef, or surloyne, the gigger or leges of Mutton, Goose, Swan, Veale, Pigge, Capon, and such like. Then bak'd meates, the hot first, as Fallow-Deer in Pelly, Chickens, or Calves foot pye and Douset. Then cold bak'd meates, Pheasant, Partridges, Turkey, Goose, Wood-cock, and such like. Then lastly, Carbonados, both simple and compound. And being thus Marshall'd from the Dresser, the Sewer upon the placing them on the Table, shall not set them down as he received them, but setting the Sallets extravagantly about the Table, mixe the Fricases about them, then the boyld meates amongst the Fricases, rost meates amongst the boyld, bak'd meates amongst the rost, and Carbonados amongst the bak'd. so that before every Trencher may stand a Sallet, a Fricase, a boyld meat, a rost meat, a bak'd meat, and a Carbonado, which will both give a most comely beauty to the Table, and very great contentment to the Guests. So likewise in the second course, she shall first preferre the lesser Wild-fowl, as Millard, Teyl, Snipe, Plover, Wood-cock, and such like: then the lesser Land-fowl, as Chicken, Pidgeons, Partridge, Raile, Turkey, Chickens, young Pea-hens, and such like.

Then the great Wild-fowl, as Bitter, Hearn, Shoveler, Crane, Bustard, and such like. Then the greater Land-fowls, as Pea-cocks, Pheasant, Pucets, Gulls, and such like. Then hot bak'd meates, as Marrow-bone pye, Quince-pye, Florentine, and Tarts.

Then cold bak'd meates, as Red Deer, Hare-pye, Gammon of Bacon-pye, Wild-bore, Roe-pye, and such like, and these also shall be marshald at the Table as the first course, not one kind all together, but each severall sort mixt together, as a lesser Wild-fowle, and a lesser Land-fowle, a great Wild-fowle, and a great Land-fowle, a hot bak'd meat and a cold; and for made dishes and Quelquechoses, which rely on the invention of the Cook, they are to be thrust in into every place that is empty, and so sprinkled over all the Table: and that is the best method for the extraordinary great Feasts of Princes.

Princes. But in case it be for much more humble men, then lesser care and fewer dishes may discharge it : Yet before I proceed to that lower rate, you shall understand, that in these great Feasts of Princes, though I have mentioned nothing but Flesh, yet is not Fish to be exempted ; for it is a beauty and an honour unto every Feast, and is to be placed amongst all the severall services, as thus : amongst your Sallets, all sorts of scused fish that lives in the fresh water ; amongst your Fricases all manner of fryed fish ; amongst your boyld meats, all fish in broths ; amongst your rost meats, all fish served hot, but dry ; amongst the bak'd meats, sea-fish that is souc'd. as Sturgeon, and the like ; and amongst your Carbonados fish that is broyld. As for your second Course, to it belongeth all manner of shell-fish, either in the shell, or without ; the hot to goe up with the hot meat, and the cold with the cold.

And thus shall the Feast be Royall, and the Service Worthy.

Now for a more humble Feast, or an ordinary proportion which any good man may keep in his Family, for the entertainment of his true and worthy friends, it must hold limitation with his provision, and the season of the year ; For Summer affords what Winter wants, and Winter is Master of that, which Summer can but with difficulty have : it is good then for him that intends to Feast, to set down the full number of his full dishes, that is, dishes of meat that are of substance, and not empty, or for shew ; and of these sixteen is a good proportion for one course unto one messe, as thus, for example ; First, a shield of Brawn with mustard, Secondly, a boyld Capon, Thirdly, a boyld piece of Beef, Fourthly, a chine of Beef roasted, Fifthly, a Neats tongue roasted, Sixthly, a Pigge roasted, Seventhly, Chewets bak'd, Eighthly, a Goose roasted, Ninthly, a Swan roasted, Tenthly, a Turkey roasted, the Eleventh, a haunch of Venison rost'd, the Twelfth, a Pasty of Venison, the Thirteenth, a Kid with a pudding in the belly, the Fourteenth, an Olive-pye, the Fifteenth, a couple of Capons, the Sixteenth, a Custard or Dousets. Now to these full dishes may be added Sallets, Fricases, Quelquechofes, and de-

deviled paste, as many dishes more which make the full service no less then two and thirty dishes, which is as much as can conveniently stand on one Table, and in one mess; and after this manner you may proportion both your second and third course, holding fastness in one half of the dishes, and shew in the other, which will be both frugall in the spender, contentment to the guest, and much pleasure and delight to the beholders. And thus much touching the ordering of great feasts, and ordinary contentments.

CHAP. III.

Of Distillations, and their vertues, and of Perfuming.

WHEN your English House wife is exact in these Rules before rehearsed, and that she is able to adorn and beautifie her Table, with all the vertuous illustrations meet for her knowledge; she shall then fort her mend to the understanding of other Housewifely secrets, right profitable and meet for her use, such as the want thereof may trouble her when need or time requires.

Therefore first I would have her furnish her self of very good Still, for the Distillation of all kinds of Water, which stills would either be of Tin, or sweet Earth, and in them she shall distill all sorts of Waters meet for the health of her Household. as Sage water, which is good for all Rhumes, and Collics; Raddish water, which is good for the stone; Angelica water good against infection: Celadine water for sore eyes: Vine water for itchings; Rose water, and Eye bright water for dimme sights; Rosemary water for Fistulacs: Treacle water for mouth Cankers; Water of Cloves for the pain in the Stomack: Saxifrage water for Gravell and hard Urine; Allom water for old Ulcers, and a world of others, any of which will last a full year at the least. Then she shall know that the best waters for the smoothing of the skinne, and keeping the face delicate and amiable, are those which are distilled from Bean-flowers, from Strawburies, from Vine leaves, from Goates-milk, from Asses milke, from the whites of Egges, from the
flowers

*Of the nature
of waters.*

flowres of Lillies, from Dragons, from Calves feet, from bran, or from yolks of Eggs, any of which will last a year or better.

Additions to distillations. First distill your water in a stillitory then put it in a glasse of great strength, and fill it with those flowrs again (whose colour you desire) as full as you can, and stop it, and set it in the stillitory again, and let it distil, and you shall have the colour you distil.

To make Aquaviva. Take of Rosemary flowres two handfulls, of Marjoram, Winter savory, Rosemary, Rue, unset Time, Germaner, Ribwort, Hartstongue, Monardella, white Worm wood, Bigloss, Red Sage, Liver wort, Hoarhound, fine Lavender, Iffopcrop, Penny-royal, Red fennel, of each of these one handfull; of Elicampare roots, clean pared and sliced, two handfulls; Then take all these aforesaid and shred them, but not wash them, then take four gallons and more of strong Ale, and one gallon of Sack lees, and put all these aforesaid herbes shred into it, and then put into it one pound of Lycoras breisall, half a pound of Anniseeds clean sifted and bruised, and of Mace and Nutmegs bruised of each one ounce: then put all together into your stilling pot, close covered with Rye paste and make a soft fire under your pot, and as the head of the Limbeck heareth, draw out your hot water and put in cold, keeping the head of your Limbeck still with cold water, but let that your fire be not too rash at the first, but let your water come at leisure; and take heed unto your stilling, that your water change not white: for it is not so strong as the first draught is; and when the water is distilled, take a gallon glass with a wide mouth, and put therein a pottle of the best water and clearest, and put into it a pottle of *Ros folis*, and half a pound of Dates bruised, and one ounce of grains, and half a pound of sugar, half a pound of seed pearl beaten, three leaves of fine Gold, stirre all these together well, then stop your glass, and set it in the Sunne the space of one or two months, and then clarify it, and use it at your discretion: for a Spoonfull or two at a time is sufficient, and the vertues are infinite.

Another Excellent Aquaviva. Fill a pot with red Wine clean and strong, and put therein the

the powders of Camomile, Gilly flowers, Ginger Pellitory, Nutmegge, Gallengal, Spicknard, Quenebus, Grains of pure long pepper, black pepper, Cummine, Fennel seed, Smallidge, Parsley, Sage, Rue, Mint, Calamint, and Horshoe of each of them alike quantity, and beware they differ not the weight of a dramme under or above : then put all the powders above-
 fil into the wine, and after put them into the distilling pot, addifil it with a soft fire, and look that it be well lited about with Rye paste, so that no fume or breath goe forth, and looke, that the fire be temperate : also receive the water out of the Lymbek into a glasse Vial. This water is called the water of Life, and it may be likened to Balme for it hath all the vertues and properties which Balme hath. This water is cleere, and lighter than Rose water, for it will flie above all liquors, for if oyle bee put above this water, it sinketh to the bottome, This water keepeth Flesh, and Fish, both Raw, and Soddn, in his own kind and state, it is good against Aches in the Bones, the Pox, and such like : neither can any thing kept in this water either rot or putrifie; it doth draw out the sweetnesse, savour, and vertues of all manner of spices, roots and herbs that are wet or layd therein : it gives sweetnesse to all manner of water that is mixt with it, it is good for all manner of cold sicknsses, and namely for the Palsie or trembling joynts, and stretching of the sinews ; it is good against the cold gout, and it maketh an old man seeme young, using to drink it fasting, and lastly it flieth away dead flesh in wounds, and killeth the Cancer.

Take Rosemary, Time, Iffop, Sage, Fennel, Nip, rootes of Elicampagne of each an handfull, of Marjoram and Penny-Royal of each half a handfull, eight slips of red Mint, halfe a pound of Lycoras, half a pound of Anniseeds, and two Gallons of the best Ale that can be brewed, wash all these herbs clean, and put into the Ale, Lycoras, Anniseeds, and herbs into a cleane hals pot, and set your Limbeck thereon, and paste it round about that no aze come out, then distil the water with a gentle fire, and keep the Limbeck coole above, not suffering it to rume too fast ; and take heed when your water
 To make
 Aqua compo-
 sita.
 changeth

changeth colour, to put another glass under, and keep the first water for it is most precious, and the latter water keep by it selfe and put it into your next pot, and that shall make it much better.

A very Principal Aqua-composita.

Take of Balm, of Rosemary flowres, tops and all, of dried Red Rose leaves, of Penny-royal, of each of these a handfull, one roote of Elicampane, the whitest that can be got, three quarters of a pound of Lycoras, two ounces of Cinamon, two Drammes of great Mace, two Dramms of Gallengal, three dramms of Coriander seeds, three drammes of Carraway seeds, two or three Nutmegs cut in four quarters, an ounce of Anniseeds, a handfull of borrag: you must chuse a fair Sunny day to gather the herbs in; you must not wash them, but cut them in sunder, and not too small; then lay all your herbs in fouseall night and a day, with the spices grossly beaten or bruised, and then distill it in order aforesaid: this was made for a learned Physicians own drinking.

To make the Imperial water.

Take a gallon of Gascoine Wine, Ginger, Gallengall Nutmegs, Grains, Cloves, Anniseeds, Fennel seeds, Carraway seeds, of each one dramme, then take Sage, Mint, Red roses, Time, Pellitory, Rosemary, Wild-time, Camomil and Lavender, of each a handfull, then bray the spices small, and the herbs also, and put all together into the Wine, and let it stand so twelve hours, stirring it so divers times, then distil it with a Limbeck, and keep the first water, for it is the best: of a Gallon of Wine you must not take above a quart of Water, this Water comforteth the Vital spirits, and helpeth the inward diseases that come of cold, as the palsie, the contraction of sinews; also it killeth wormes, and comforteth the stomack, it cureth the cold Drop sic, helpeth the stone, the stinking breath, and maketh one seeme young.

To make Cinamon water.

Take a pottle of the best Sack, and halfe a pint of Rose-water, a quarter and halfe pound of good Cinamon well bruised but not small beaten, distill all these together in a Glasse still, but you must carefully look to it, that it boyl not over hastily, and attend it with cold wet cloaths to cool the top of the still if the water should offer to boyle too hastily. This water is very Sovereign for the stomack, the head, and all the inward

inward parts, it helps digestion, and comforteth the vitall spirit.

1. Take Fennell, Rue, Vervine, Endive, Bettony, Germander, Red-rose, C-pillus Veneris, of each an ounce; stamp them, and keep them with white Wine a day and a night, and distill water of them, which water will divide in three parts: the first water you shall put in a glasse by it self, for it is more precious than gold, the second as silver, and the third as balm, and keep these three parts in glasses: this water you shall give the Rich for gold, to meaner for silver, to Poor men for balm. This water keepeth the sight in cleareness, and purgeth all grosse humors.

2. Take Salgemnia a pound, and lap it in a green dockleaf, and lay it in the fire till it be well roasted and wax white, then put it in a glasse against the air a night, and on the morrow it shall be turned to a white water like unto Chrystall, keep this water well in a glasse, and put a drop into the eye, and it shall cleanse and sharp the sight: It is good for any evill at the heart, for the Morpew, and the Canker in the mouth, and for divers other evils in the body.

3. Take the roots of Fennell, Parsly, Endive, Bettony, of each an ounce, and first wash them well in luke-warm water, and bray them well with white Wine a day and a night, and then distill them into water: This water is more worthy than Balm; it preserveth the sight much, and cleanseth it of all filth, it restraineth teares, and comforteth the head, and avoideth the water that commeth through the pain of the head.

4. Take the seeds of Parsley, Achannes, Vervine, Carawayes, and Centaury, of each ten drams, beat all these together, and put it in warm water a day and a night, and put it in a vessell to distill: This water is a precious water for all fore eyes, and very good for the health of Mans or Womans body.

5. Take Limmell of Gold, Silver, Lattin, Copper, Iron, Steele, and Lead: and take Lethargy of Gold and Silver, take Calamint, and Columbine, and steep all together, the first day in the Urine of a man-child, that is between a day and a

night ; the second day in white Wine ; the third day in the juyce of Fennel ; the fourth day in the white of Egges ; the fifth day in womans milke that nourseth a man-child ; the sixth day in red Wine ; the seventh day in the whites of Egges ; and upon the eighth day bind all these together , and distill the water of them , and keep this water in a vessell of Gold or Silver : The vertues of this water are these : First, It expelleth all Rhumes , and doth away all manner of sicknesse from the eyes , and wears away the pearl, pin and web : it draweth again into his own kind the eye-lids that have been bleared, it easeth the ache of the head, and if a man drink it , it maketh him look young, even in old age ; besides a world of other most excellent vertues.

6. Take the Goldsmiths-stone , and put it into the fire, till it be red hot, and quench it in a pint of white Wine, and do so nine times , and after grind it, and beat it small, as I cleanse it as clean as you may , and after set it in the Sun with water of Fennell distilled, and Vervine, Roses, Celladine, and Rue, and a little Aquavitæ ; and when you have sprinkled it in the water nine times, put it then in a vessell of glasse, and yet upon a reversion of the water distill it , till it passe over the touch four or five inches : and when you will use it, then stirre it all together , and then take up a drop with a feather , and put it on your nail, and if it abide, it is fine and good : then put it in the eye that runneth, or annoint the head with it if it ake, and Temples, and, believe it, that of all waters this is the most precious, and helpeth the sight, or any pain in the head.

The verrues of
severall wa-
ters.

The water of Chervile is good for a sore mouth.

The water of Calamint is good for the stomach.

The water of Plantain is good for the fluxe, and the hot drop sic.

Water of Fennell is good to make a fat body small , and also for the eyes.

Water of Violets is good for a man that is sore within his body, and for the reins, and for the liver.

Water of Endive is good for the Drop sic, and for the Jaundise and the stomach.

Water

Water of Borage is good for the stomach, and for the Illiaca passio, and many other sicknesses in the body.

Water of both Sages is good for the Palsie.

Water of Buttony is good for old age, and all inward sicknesses.

Water of Radish, drunk twice a day, at each time an ounce, or an ounce and a half, doth multiply and provoke Lust, and also provoketh the terms in women.

Rosmary water, (the face washed therein both morning and night) causeth a fair and clear countenance; also the head washed therewith, and let dry of it self, preserveth the falling of the haire, and causeth more to grow: also two ounces of the same drunk, driveth Venome out of the body in the same sort as Michridate doth; the same twice or thrice drunk, at each time half an ounce, rectifieth the mother, and it causeth women to be fruitfull. When one maketh a bath of this decoction, it is called the bath of Life: the same drunk, comforteth the heart, the brain, and the whole body, and cleanseth away the spots of the face, it maketh a woman look young, and causeth women to conceive quickly, and hath all the vertues of Balm.

Water of Rew, drunk in a morning four or five dayes together, at each time an ounce, purifieth the flowers in women: the same water drunk in the morning fasting, is good against the griping of the bowels, and drunk at morning, and at night, at each time an ounce, it provoketh the termes in women.

The water of Sorrell drunk, is good for all burning and pestilent Feavers, and all other hot sicknesses: being mixt with Beere, Ale, or Wine, it slaketh the thirst: it is also good for the Yellow Jaundise, being taken six or eight dayes together: it also expelleth from the Liver, if it be drunk, and a cloath wet in the same, and a little wrung out, and so applied to the right side over against the Liver, and when it is dry, then wet another, and apply it; and thus do three or four times together.

Lastly, the water of Angelica is good for the head, for inward infection, either of plague or pestilence, it is very so-

veraign for sore breasts ; also the same water being drunk of, twelve or thirteen daies together, is good to unlade the stomack of grosse humours and superfluities, and it strengthneth and comforteth all the universall parts of the body : and lastly , it is a most soveraign medicine for the Gout , by bathing the diseased members much therein.

Now to conclude and knit up this Chapter , it is meet that our Housewife know that from the eighth of the Kalends of the Month of *April* , unto the eighth of the Kalends of *July* , all manner of herbs and leaves are in that time most in strength, and of the greatest vertue to be used and put in all manner of Medicines ; also from the eighth of the Kalends of *July* , unto the eighth of the Kalends of *October* , the stalkes, stems, and hard branches of every herb and plant is most in strength to be used in Medicines ; and from the eighth of the Kalends of *October* , unto the eighth of the Kalends of *April* , all manner of roots of herbs and plants are the most of strength and vertue to be used in all manner of Medicines.

An excellent
water for per-
fume.

To make an excellent sweet water for perfume , you shall take of Basill, Mints, Marjerome, Corn-flagge-roots , Issop, Savory, Sage, Balme, Lavender and Rosemary , of each one handfull ; of Cloves, Cinamon, and Nutmegs, of each half an ounce ; then three or four Pomcitrons cut into slices , infuse all these into Damask-Rose-water, the space of three daies, and then distill it with a gentle fire of Char-coal , then when you have put it into a very cleanglasse , take of fat Musk, Civet, and Amber-greece , of each the quantity of a scruple, and put it into a ragge of fine Lawn , and then hang it within the water. This being burnt either upon a hot pan , or else boyled in perswiving-pans with Cloves , Bay-leaves, and Lemon-pills, will make the most delicatest perfume that may be, without any offence , and will last the longest of all other sweet perfumes, as hath been found by experience.

To perfume
Gloves.

To perfume Gloves excellently , take the oyle of sweet Almonds , oyle of Nutmegs, oyl of Benjamin, of each a dram, of Amber-greece, one grain , fat Musk two graines : mixe them all together , and grind them upon a Painters stone, and then annoint the Gloves therewith , yet before you annoint them

them, let them be dampishly moistned with Damask Rose-water.

To perfume a Jerkin well, take the oyl of Benjamin a penny worth, oyl of spike and oyl of olives, half penny worths of each. To perfume a jerkin.
and take two sponges, and warme one of them against the fire and rub your jerkin therewith, and when the oyl is dryed take the other sponge and dip it in the oyl, and rub your jerkin therewith till it be dry, then lay on the perfume before prescribed for gloves.

To make very good washing balls, take Storax of both kinds, Benjamin, Calamus Aromaticus, Labdanum, of each alike; To make Washing-balls.
and bray them to powder with Cloves and Orris; then beate them all with a sufficient quantity of Soap till it be stiffe, then with your hand you shall work it like paste. and make round balls thereof.

To make Musk balls, take Nutmegges, Mace, Cloves, Saffron, To make a Musk-ball.
and Cinamon, of each the weight of two pence. and beat it to fine powder, of Masticke the weight of two pence half penny, of Storax the weight of six pence, of Labdanum the weight of ten pence; of Ambergreece the weight of six pence; and of Musk four graines, dissolve and work all these in hard sweet sope till it come to a stiff paste, and then make balls thereof.

To make a good perfume to burn, take Benjamin one ounce, A perfume to burn.
Storax, Calamint two ounces, of Masticke white, Ambergreece, of each one ounce; Licor, Calamus, Aromaticus, Cypresse wood, of each half an ounce, of Camphire one scruple. Labdanum one ounce; beat all these to powder, then take of Sallow Charcole five ounces, of liquid Storax two ounces, beat them all with Aquavitz, and then you shall rowl them into long round rowls.

To make Pomanders, take two penny worth of Labdanum, To make Pomanders.
two penny worth of Storax liquid, one penny worth of Calamus Aromaticus, as much Balm, half a quarter of a pound of fine wax, of Cloves and Mace two penny worth, of liquid Aloes three penny worth, of Nutmegs eight penny worth, and of Musk four grains; beat all these exceedingly together till they come to a perfect substance, then mould it in any fashion you please, and dry it.

To make Vinegar.

To make excellent strong Vineger, you shall brew the strongest Ale that may be, and having tanned it in a very strong vessel, you shall set it either in your Garden or some other safe place abroad, where it may have the whole Summers day Sun to shine upon it and therefore it lye till it be extream sowre; then, into a Hogthead of this Vineger put the leaves of four or five hundred Damask roses, and after they have layen for the space of a month therein, house the vineger and draw it as you need it.

To make dry Vinegar.

To make dry vineger which you may carry in your pocket, you shall take the blacks or green Corn either Wheat or Rye, and beat it in a mortar with the strong st vineger you can get, till it come to paste, then roll it into little balls, and dry it in the Sun till it be very hard then when you have occasion to use it cut a little piece thereof and dissolve it in Wine, and it will make a strong Vineger.

To make verjuice.

To make Verjuice, you shall gather your Crabs as soon as the Kernels turn black, and having laid them a while in a heape to sweat together, take them and pick them from the stalks, blacks, and rottenness: then in long troughs with beetles for the purpose, crush and break them all to mass; then make a bagge of coarse hair-cloath as square as the press, and fill it with the crushed Crabs, then put it into the press, and presse it, while any moisture will drop forth, having a clean vessel underneath to receive the liquor; this done, tun it up in sweet Hogshheads, and to every Hogthead put half a dozen handfulls of Damask rose leaves, and then bung it up, and spend it as you shall have occasion.

Additions to conceited secrets.

Many other pretty secrets there are belonging unto curious *House-wives*: but none more necessary than these already rehearsed, except such as shall hereafter follow in their proper places.

Take of Orris six ounces, of Damask Rose leaves as much, of Marjerom and sweet Basil of each an ounce, of Cloves two ounces, yellow Sanders two ounces, of Citren pils seven drams, of Lignum alces one ounce, of Benjamin one ounce, of Storax one ounce, of Musk one dram; bruise all these, and put them into a bag of silk or linnen, but silk is the best

To make sweet powder for baggs.

Take of Orris four ounces, of Gallaminis one ounce, of Cinnamon half an ounce, of Rose leaves dried two handfulls, of dried Marjerom

Marjoram one handfull, of Spike one handfull, Cloves one ounce, Benjamin and Rax of each two ounces, of white Sanders, and yellow of each one ounce, beat all these into a grosse powder, then put to it of Muske a dram, of civet halfe a dram & of Ambergrece half a dram; then put them into a taffety bag and use it. To make sweet bagges.

Take of Bay-leaves one handfull, of red Roses two handfulls, of Damask roses three handfulls, of Lavender four handfulls, of Basil one handfull, Marjoram two handfulls, of Camomile one handfull, of the young tops of sweet Bryer two handfulls, of Dandelian Tan- How to make sweet water.
ney two handfulls, of Orange peeles six or seven ounces, of cloves & make a groats worth: put all these together in a pottle of new Ale in cornes, for the space of three dayes, shaking it every day three or four times; then distil it the fourth day in a Stil with a continual soft fire, and after it is distilled, put into it a grain or two of musk.

Take a quart of *Malmsey* Lees, or a quart of *Malmsey* simply, A very Rare
one handfull of Marjoram, of Basil as much, of Lavender foure and pleasant
handfulls, Bay leaves one good handfull, Damask Rose leaves Damask-wa-
four handfulls, and as many of Red, the peels of five Oranges, ter.
or for want of them one handfull of the tender leaves of Wall-
Nut-trees, of Benjamin half an ounce, of Calamus Aromaticus as
much, of Camphire four drams, of Cloves one ounce, of Bilda-
min half an ounce; then take a pottle of running water, and put
in all these spices bruised into your water and *malmsey* together,
in a close stopped pot with a good handfull of Rosemary, and
let them stand for the space of six dayes: then distil it with a soft
fire: then set it in the Sun sixteen dayes with four grains of
musk bruised. This quantity will make three quarts of water,
Perfumet.

Take and brew very strong Ale, then take half a dozen Gal- To make the
best vinegar.
lons of the first running, and set it abroad to cool, and when it
is cold put yest into it, and herd it very strongly; then put it up
in a firkin and distil it in the Sun, then take four or five hand-
full of beans, and parch them in a pan till they burst: then
parch in in as hot as you can into the Firkin, and stop it with
a lute clay about the bung hole; then take a handfull of
clean Rye-Leaven and put in the Firkin; then take a quantity of
berberies, and bruise and strain them into the Firkin, and a
good

good handfull of Salt, and let them lye and work in the Sun from *May* till *August*: then having their full strength, take Rose leaves and clip the white ends off, and let them dry in the Sun, then take Elder flowres, and pick them and dry them in the Sun, and when they are dry put them in bags, and keep them all the Winter: then take a pottle pot and draw forth a pottle out of the serkin into the pottle, and put a handfull of the red Rose-leaves, and another of the Elder flowres into the pottle, and then hang it in the Sun where you may occupy the same, and when it is empty, take out all the leaves and fill it again as you did before.

To perfume
Gloves.

Take Angelico water, and Rose water, and put into them the powder of Cloves, Amber greece, Musk, & Lignum Aloes, Benjamin and Cal mus aromaticus: bray these till half be consumed: then strain it and put your Gloves therein; then hang them in the Sun to dry, and turn them often: and thus three times, wet them and dry them again: or otherwise, take Rose water and wet your Gloves therein, then hang them up till they be almost dry; then take half an ounce of Benjamin and grind it with the oyle of Almonds, and rub it on the Gloves till it be almost dried in: then take twenty grains of Amber greece, and twenty grains of Musk, and grind them together with oyl of Almonds, and so rub it on the Gloves, and then hang them up to dry, or let them dry in your bosome, and so after use them at your pleasure.

CHAP. IV.

The ordering, preserving, and helping of all sorts of Wines: and first of the choyce of sweet Wines.

I Do not assume to my self this Knowledge of the Vintners secrets, but I ingenuously confesse, that one profest skilfull in the Trade, having rudely written, and more rudely disclosed this secret, and preferring it to the Stationer, it came to me to be published, which I have done, knowing that it is necessary, &c.

It is necessary that our English Housewife be skilful in the election, preserving, and curing of all sorts of Wines, because they be usual charges under her hands, and by the least
neg-

neglect must turn the Husband to much losse : therefore to speak first of the election of sweet Wines, she must be carefull that her Malmseys be full Wines, pleasant, well hewed and fine : that *Bastards* be fat, and if it be tawny it skills not ; for the tawney *Bastards* be alwayes the sweetest. Muscadine must be great, pleasant and strong with a sweet sent, and with Amber colour. Sack if it be Sere (as it should be) you shall know it by the mark of a cork burned on one side of the bung, and they be ever full gage, and so are no other Sacks, and the longer they lye, the better they be.

Take a pleasant But of Malmsey, and draw it out a quarter and more ; then fill it up with fat *Bastard* within eight gallons or thereabouts, and parel it with six Eggs, yolks and all, one handfull of bay salt, and a pint of conduit water to every parel, and if the Wine be of high colour, put in three gallons of new milk, but skinnie off the cream first, and beat it well : or otherwise, if you have a good But of *Malmsey*, and a good Pipe of *Bastard*, you must take some empty But or Pipe, and draw thirty gallons of *Malmsey*, and as many of *Bastard*, and beat them all well together ; and when you have so done, take a quarter of a pound of Ginger, and bruise it and put it into your vessel, then fill it up with *Malmsey* and *Bastard* : Or otherwise thus, if you have a pleasant But of *Malmsey* which is called Raltmow, you may draw out of it forty Gallons ; and if your *Bastard* be very faint, then thirty Gallons of it will serve to make it pleasant : then take four gallons of new milk, and beat it, and put it into it when it lacketh of twelve gallons of full, and then make your flaver.

To make Muscadine, and give it a flaver

Take an ounce of Corianders, of bay Salt, of Cloves, of ^{How to flaver Muscadine.} such as much, one handfull of Savory : let all these be blended, and bruised together, and sow them close in a bagge, and take halfe a pint of Dammask water, and lay your flaver into it, and then put it into your But, and if it fine give it a parel, and then fill it up, and let it lye till it fine : or else thus, take Coriander Rootes a pennyworth, one pound of Anniseeds, one pennyworth in Ginger, bruise them together, and put them into a bagge as before, and make your bagge long and small, that it go in and out

out at the bung-hole, and when you do put it in, fasten it with a thread at the bung; then take a pint of the strongest Damae water, and warme it luke warme, then put it into the Butte, and then stoppe it close for two or three dayes at least; and then, if you please, you may see it a brooch.

To apparel
Maskadine
when it comes
new to be used
in twenty four
hours.

Take seven whites of new laid Eggs, two handfulls of Bay-salt, and beat them well together, and put therein a pint of Sack or more, and beat them till they be as short as Snow; then over draw the Butte seven or eight Gallons, and beat the Wine, and stirre the Lees, and then put in the parel, and beat it, and so fill it up, and stop it close; and draw it on the marrow.

To make
white bassard.

Draw out of a Pipe of *Bassard* ten Gallons, and put to it five Gallons of new milk, and skimme it as before, and all to beat it with the parel of eight whites of Eggs, and a handfull of Bay salt, and a pint of Conduit water, and it will be white and fine in the morning. But if you will make very fine *Bassard*, take a White wine Hogges-head, and put out the Lees, and wash it clean, and fill it half full, and half a quarter, and put it to four Gallons of new milk, and beat it well with the whites of five Eggs, and fill it up with White wine and Sack, and it will be white and fine.

How to help
Bassard being
cager.

Take two Gallons of the best *stone* Honey, and two Gallons of White wine, and boyl them in a fair panne, skimme it clean, and strain it through a fair cloath that there be no motes in it: then put to it one ounce of *Corianders*, and one ounce of *Aniseeds*, four or five *Orange-pees* dry and beaten to powder: let them lye three dayes: then draw your *Bassard* into a clean Pipe, then put in your honey with the rest, and beat it well: then let it lye a week, and touch it not, after draw it at your pleasure.

To make *bassard* white,
and to rid a-
way Laggs.

If your *Bassard* be fat and good, draw out forty Gallons, then you may fill it up with the Laggs of any kind of white wines or Sacks; then take five Gallons of new milke, and first take away the Cream, then strain it through a clean cloth, and when your Pipe is three quarters full, put in your milk; then beat it very well, and fill it so, that it may lack fifteen Gallons, then
apard

aparel it thus : take the whites onely of ten Egges, and beat them in a fair tray with *Bay salt* and *Conduite water* ; then put it into the pipe and beat it well, and so fill it up, and let it stand open all night ; and if you will keep it any while, you must on the morrow stop it close, and to make the same drink like *Offer*, give it this flaver : take a pound of *Annis-seeds*, two pence in *Corianders*, two pence in *Ginger*, two pence in *Clover*, two pence in *Grains*, two pence in long *Papper*, and two pence in *Lycora* ; bruise all these together : then make two bigges of linnen cloth, long and small, and put your spices into them, and put them into the pipe at the bung, making them fast there with a thread, that it may sink into the Wine, then stop it close, and in two dayes you may broach it.

Take and draw him from his Lees, if he have any, and put the Wine into a *Malmsey But* to the Lees of *Malmsey*, then put to the *Butard* that is in the *Malmsey But*, nigh three Gallons of the best *Wort* of a fresh tap, and then fill him up with *Butard* or *Malmsey*, or *Cute*, if you will ; then apparel it thus : First, *Parcel* him, and *beat* him with a staff, and then take the whites of four new laid Eggs, and beat them with a handfull of salt till it be as short as *Mosse*, and then put a pint of turning water therein, and so fill the Pipe up full, and lay a little stone on the bung, and set it abroach within four and twenty houres, if you will.

If you have a good But of *Malmsey*, and a But or two of Sack that will not be d unke : for the Sack prepare some empty But or Pipe, and draw it more than half full of Sack : then fill it up with *Malmsey*, and when your But is full within a little, put into it three Gallons of *Spanish Cute*, the best that you can get ; then beat it well, then take your Taster, and see that it be deep coloured ; then fill it up with Sack, and give it apparel, and beat it well ; The apparel is this : Take the yolkes of ten Egges, and beat them in a cleane bason with a handfull of *Bay salt*, and a quart of *Conduite water*, and beat them together with a little peece of *Brech*, and beat it till it be as short as *Mosse*, then draw five or six gallons out of your But ; then beat it again, and then fill it up, and the next day it will be ready to

to be drawn : this apparel wil serve both for *Muscadine*, *Bastard*, and for *Sack*.

To shift malmsiey, and to rid away ill wines

If you have two principal Buts of *Malmsey*, you may make three good Buts with your Lagges of Claret and Sack, if you put two gallons of red Wine in a But, it will save the more *Cute* : then put two or three gallons of *Cute*, as you see cause ; and if it be *Spanish Cute*, two gallons will go further than five gallons of *candy Cute*, but the *candy Cute* is more naturall for the *Malmsey* : also one But of good *Malmsey*, and a But of Sack that hath lost his colour, will make two good Buts of *Malmsey*, with the more *Cute* ; and when you have fill'd your buts within twelve gallons, then put in your *Cute*, and beat it halfe an hour and more : then put in your parel and let it lye.

If Sack want his colour.

First, parel him as you did the *Bastard*, and order him as shall be shewed you for the *white Wine* of *Gascogne* with *milke*, and so set him abroad.

For Sack that is tawny.

If your *Sack* have a strong Lee or taste, take a good sweet But, fair washed, and draw your *Sack* into it, and make unto it a parel, as you do to the *Bastard*, and beat it very well, and so stop up your But : and if it be tawny, take three gallons of new *milke*, and strain it clean, and put it into your *Sack*, then beat it very well, and stop it close.

For Sack that doth rape and is brown.

Take a fair empty But with the Lees in it, and draw your *Sack* into the same from his Lees fine : then take a pound of *Rice flower*, as fine as you can get, and four graines of *Campfire*, and put it into the *Sack* ; and if it will not fine, give it a good parel, and beat it well : then stop it, and let it lye.

To colour sack or any white wine.

If any of your *Sacks* or *white Wines* have lost their colour, take three gallons of new *milke*, and take away the Creame : then over-draw your Wine five or six gallons, then put in your *milke* and beat it ; then lay it a fore-taree all night, and in the morning lay it up, and the next day (if you will) you may set it abroad.

If Alligant be grown hard.

Draw him out in fresh Lee, and take three or four Gallons of *stone-honey* clarified, and being coole, put it in, and parel it with the yolkes of foure Egges, whites and all, and beat it well,

well, and fill it up, and stop it close, and it will be pleasant and quick as long as it is in drawing.

Take three Gallons of white Honey, and two Gallons of For Alligant Red Wine, boyle them together in a faire pan, and skim it ^{that is four.} cleane, and let it stand till it be fine and cold, then put it into your Pipe, yet nothing but the finest; then beat it well, and fill it up, and stop it close, and if your Alligant be pleasant and great, it will doe much good, for that one Pipe will rid away divers.

There are two sorts of Rhenish wines, that is to say, *Elstertune* and *Ravabant*: the *Elstertune* are the best, you shall know it by the Fat, for it is double bard, and double pinned; the *Ravabant* is nothing so good, and there is not so much good to be done with them as with the other. If the wines be good and pleasant, a man may rid away a hoghead or two of white Wine, and this is the most vantage a man can have by them: and if it be slender and hard, then take three or foure gallons of stone-honey, and clarifie it clean; then put into the honey, foure or five gallons of the same Wine, and then let it seeth a great while, and put into it two pence in Cloves bruised, let them seeth together, for it will take away the sent of honey, and when it is foddren take it off, and ser it by, till it be thorow cold: then take four gallons of milk and order it as before, and then put all into your Wine, and all to beat it; and (if you can) role it, for that is the best way: then stop it close, and let it lye, and that will make it pleasant.

The Wines that be made in *Bordeaux* are called *Gascoine* Wines, and you shall know them by their hazell hoope, and they must be full gage, and sound Wines.

Of what countreyes wines are by their names.

The Wines of the high Countries, and which are called high Country Wines, are made some thirty or fourty miles beyond *Bordeaux*, and they come not down so soon as the other, for if they do, they are all forfeited; and you shall know them ever by their hazell hoops, and the length gage lacks.

Then have you Wines that be called *Galloway*. both in Pipes and Hogheads and be long, and lack two Cesters in gage and a half, and the wines themselves are high coloured. Then there are other Wines which are called white Wine of *Angulle*,
very

very good Wine, and lacks little of gage, and that is also in pipes for the most part, and is quarter bound. Then there are *Rchili* wines, which are also in pipes long and slender: they are very small hedge wines, sharp in Taste, and of a pallid complexion. Your best Sacks are of *Seres* in *Spain*, your smaller of *Galicie* and *Portugall*: your strong Sacks are of the Islands of the *Canaries*, and of *Malligo*, and your Muscadine and Malmseys are of many parts of *Italy*, *Greece*, and some speciall Islands.

Every *Terse* is in depth the middle of the knot in the midst.

The depth of every Hogthead is the fourth prick above the knot.

The depth of every Punchcon is the fourth prick next to the punchener.

The depth of every Sack-but is the four pricks next to the punchcon.

Notes of ga- The depth of the half Hogthead is at the lowest notch, and
ging of wines, accounted one.

oyles, and li- The depth of the half *Terse* is at the second notch, and is ac-
quots. counted two.

The depth of the half Hogthead and half Pipe, is at the third notch, and accounted three.

The depth of the halfe-But is at the fourth notch, and is accounted four.

1. The first gage is marked thus.



2. The halfe Seſtern lacketh thus.



3. The whole Seſtern lacketh thus.



4. The Seſtern and half lag.



5. The two Seſterns, thus.



6. The two and halfe Seſterns, thus.



The contents
of all manner
of Gascoine
Wine, and o-
thers,

A Bar of Malmsey, if he be full gage, is one hundred and twenty six gallons.

And so the Tun is two hundred and fifty two gallons. Every Sestern is three gallons.

If you sell for twelve pence a gallon, the Tun is twelve pound, twelve shillings.

And Malmsey and Rhenish wine at ten pence the gallon, is the Tun ten pound.

Eight pence the gallon, is the Tun eight pounds.

Six pence the gillon, is the Tun six pounds.

Five pence the gallon, is the Tun five pounds.

Four pence the gallon, is the Tun four pounds.

Now for Gascoine Wine, there goeth foure Hogsheds to a Tun, and every Hogshedd is sixty three gallons, the two hogsheds one hundred twenty six gallons; and four hogsheds are two hundred fifty two gallons; and if you sell for eight pence the gallon, you shall make of the Tun eight pounds, and so forth: look how many pence the gallons are, and so many pounds the Tun is.

Now for bastard, it is the same rate, but it lacketh of gage two Sesterns and a half, or three at a pipe, and then you must abate six gallons of the price, and so in all other wines.

To chuse Gascoine wines.

See that in your choise of Gascoine wines, you observe, that your Claret wines be faire coloured, and bright as a Rubie, not deep as an Amethyst; for though it may shew strength, yet it wanteth neatnesse: also let it be sweet as a Rose or a Violet, and in any case let it be short, for if it be long, then in no case meddle with it.

For your white Wines, see they be sweet and pleasant at the Nose, very short, clear and bright, and quick in the Taste.

Lastly, for your Red Wine, provided that they be deep coloured, and pleasant, long, and sweet, and if in them or Claret wine be any default of colour, there are remedies enow to amend and repair them.

To remedy Claret wine that hath lost his colour.

If your Claret wine be faint, and have lost his colour; then take a fresh Hogshedd with his fresh Lees, which was very good wine, and draw your wine into the same; then stop it

it close and right, and lay it a fore-take for two or three dayes that the Lees may run through it; then lay it up till it be fine, and if the colour be not perfect, draw it into a Red Wine Hoghead, that is new drawn with the Lees, and that will colour of himselfe, and make him strong: or take a pound of Tournsoll or two, and beat it with a gallon or two of wine, and let it lye aday or two; then put it into your hoghead, draw your Wine againe, and wash your cloths; then lay it a fore-take all night, and rouse it on the morrow; then lay it up, and it will have a perfect colour.

And if your Claret Wine have lost his colour, take a penny worth of Dimsens, or else black bulliffes, as you see cause; and stew them with some Red wine of the deepest colour, and make thereof a pound or more of sirrop, and put it into a cleane glasse, and after into the hoghead of Claret wine: and the same you may likewise do unto red Wine if you please.

And if your white Wine be faint, and have lost his colour, A remedy for if the wine have any strength in it, take to a hoghead so much white wine as you intend to put in, out of the said milk, and a handfull of Rice bearen very well, and a little salt; and lay him a fore-take all night, and on the morning lay him up againe, and set it abroad in any wise the next wine you spend, for it will not last long. white wine that hath lost his colour.

Take three Gallons of new milk, and take away the Cream off For white it; then draw five or six gallons of wine, and put your milk into wine that hath the hoghead, and beat it exceeding well, then fill it up, but be- lost his colour. fore you fill it up, if you can rouse it; and if it be long and small, take half a pound of Roch Allum finely bearen into powder, and put into the vessel, and let it lye.

Take and draw it into new Lees of the owne nature, and then A remedy for take a dozen of new pippins, and pare them, and take away Claret that the cores, and then put them in; and if that will not serve, drinks foul. take a handfull of the Oake of Jerusalem, and stamp it, then put it into your Wine, and beat it exceeding well, and it will not only take away the foulness; but also make it have a good sent at the nose.

If your red Wine drink faint, then take a hoghead that Albant hath been in with the Lees also, and draw your Wine in-

to it. and that will refresh it well , and make the wine well coloured ; or otherwise, draw it close to fresh lees , and that will recover it again , and put to it three or four gallons of Allegant, and turn it on his lees.

If your Red wine lack colour, then take out four gallons, and put in four gallons of Allegant, and turn him on his lees, and the bung up, and his colour will return and be fair.

Take a good But of Malmsey , and over-draw it a quarter or more, and fill him up with fat Bastard , and with Cuteda gallon and more , then pirrell him as you did your Malmsey.

You shall in all points dresse him , as you did dresse your Sack, or White Wine in the like case , and parrel him, and then set him abroach. And thus much touching Wines of all sorts , and the true use and ordering of them so far forth as belongeth to the knowledge and profit of our English Housewife.

If *Offey* com-
pleat hath
lost his co-
lour.

CHAP. V.

*Of Wool, Hempe, Flax, and Cloath, and dying of Colours,
of each severall substance , with all the knowledges
belonging thereto.*

Our English Housewife , after her knowledge of preserving and feeding her Family , must learn also how, out of her owne indeavours , she ought to cloath them outwardly and inwardly : outwardly for defence from the cold and comelineffe to the person ; and inwardly, for cleanliness and neatnesse of the skin , whereby it may be kept from the filth of sweator vermine ; the first consisting of woollen cloth, the latter of linen.

*Of making
woollen cloth.* To speak then first of the making of woollen cloth , it is the office of a Husbandman at the sheering of his sheep , to bestow upon the House-wife such a competent proportion of wool, as shall be convenient for the clothing of his Family , which Wool as soon as she hath received it, she shall open , and with a pair of sheeres , (the fleece lying as it were whole before her)

she

she shall cut away all the coorse locks, pitch, brands, tard-locks, and other filtrings, and lay them by themselves for coorse Coverlids, or the like; then the rest so clenfed, she shall break into pieces, and toafe it every lock by lock, that is, with her hands open, and so divide the wool, as not any part thereof may be feltred or close together, but all open and loose; then so much of the Wool as she intends to spin white, she shall put by it selfe, and therest which she intends to put into colours, she shall waigh up, and divide into severall quantities, according to the proportion of the web which she intends to make, and put every one of them into particular bags, made of netting, with tallies, or little pieces of wood fixed unto them, with privy marks thercon, both for the weight, the colour, and the knowledge of the same wool, when the first colour is altered: this done, she shall if she please send them unto the Diers, to be died after her own fancy; yet forasmuch, as I would not have our English House-Wife ignorant in any thing meet for her knowledge, I will shew her here, before I proceed any further, how she shall dye her wool her selfe, into any colour meet for her use.

First, then to dye wool black, you shall take two pound of *To dye wool* Gall, and bruise them, then take halfe so much of the best green black. Coperas, and boyl them both together in two gallons of running water: then shall you put your wool therein, and boyl it; so done, take it forth and dry it.

If you will dye your wool of a bright haire colour: first boyl *To dye wool* your wool in Allum and Water, then take it forth and when it is cold, take Chamber-lye, and Chimney-foot, and mixing them *of a haire colour.* together well, boyle your wool again therein, and stirre it exceedingly well about, then take it forth, and lay it where it may conveniently dry.

If you will dye your wool into a praisest Red colour, sit on *To dye wool* a pan full of water; when it is hot, put in a peck of wheat bran, red, and let it boyl a little, then put it into a Tub, and put twice as much cold water unto it, and let it stand untill it be a week old: having done so, then shall you put to ten pounds of wool, a pound of Allum; then heate your liquor again, and put in your Allum, and so soone as it is melted, put in your wool,

and let it boyl the space of an houre ; Then take it again , and then set on more bran and water.

Then take a pound of Madder , and put in your Madder when the Liquor is hot : when the Madder is broken, put in the wool and open it , and when it commeth to be very hot, then stir it with a staffe, and then take it out , and wash it with fair water ; then set on the pan again with fair water , and then take a pound of Saradine brick, and put it therein , and let it boyl the space of an Ege seething ; then put in the wool , and stir it three or foure times about, and open it well , and after dry it.

To dye wool blew. To dye wool blew, take good store of old chambe lye, and set it on the fire, then take half a pound of blew Neale. Byse, or Indico, and beat it small in a Morter , and then put it into the Lye, and when it seeths put in your wool.

To dye a puke. To dye wool of a puke colour, take Galls, and beat them very small in a Morter, put them into fair seething water , and boyle your wool or your Cloth therein , and boyle them the space of halfe an hour : then take them up, and put in your Coperas into the same Liquor, then put in your wool again , and doing this once or twice, it will be sufficient.

To dye a Cinder colour. And if you will dye your wool of a Cinder colour , which is a very good colour , you shall put your Red wool into your puke Liquor ; and then it will faile lesse to be of a Cinder colour.

To dye green or yellow. If you will dye your wool either green or yellow , then boyle your Wood-ward in a faire water , then put in your wool or Cloth, and the wool which you put in white , will be yellow , and that wool which you put in blew, will be green, and all this with one Liquor : provided that each be first boyled in Allem.

When you have thus dyed your wool , into those severall colours, meet for your purpose , and have also dried it well ; then you shall take it forth , and toase it over againe as you did before : for the first toasting was to make it receive the colour or dye : this second is to receive the oyle , and make it fit for spinning ; which as soon as you have done, you shall mix your colours together : wherein you are to note that the best

medly

medly is that which is compounded of two colours onely, as a light colour and a dark : for to have more is but confusion, and breeds no pleasure but distraction to the sight: therefore for the proportion of your mixtures, you shall ever take two parts of the darker colour, and but a third part of the light. As for example, your web contains twelve pound, and the colours are red and Greene : you shall then take eight pound of the green wool, and but four pound of the red ; and so of any other colours where there is difference in brightnesse.

But if it be so that you would needs have your cloath of three Colours, as of two dark and one light, or two light and one dark : As thus, you will have Crimson, Yellow, and Puke : you shall take of the Crimson and Yellow of each two pound, and of the Puke eight pound : for this is two light colours to one dark : but if you will take a Puke, a Green and an Orange tawny, which is two dark, and one light ; then you shall take of the Puke and green, and the orange tawny, of each alike quantity ; that is to say, of either four pounds. When you have equally divided your portions, then you shall spread upon the ground a sheet, and upon the same first lay a thinn layer or bed of your darker colour, all of one even thicknesse, then upon the same layer, lay another much thinner of the brighter quantity, being so neer as you gusse it, hardly half so much as the darker : then cover it over with another layer of the sad colour or colours again ; then upon it another of the bright again : And thus lay layer upon layer till all your wool be spread ; then beginning at one end to role up round and hard together the whole bed of wool ; and then causing one to kneel hard upon the roll, that it may not stir nor open, with your hands touze and pull out all the wool in small pieces ; And then taking a pair of Stock cards sharp and large, and bound fast to a form, or such like thing ; and on the same, Comb and Card all over the Wool, till you see it perfectly and undistinctly mixed together, and that indeed it is become one intire colour of divers, without spots, or undivided locks or knots ; in which doing you shall be very carefull and heedfull with your eye ; and if you find any hard knot or other felter in the Wool, which will not open, though it be never so

small, yet you shall pick it out, and open, it or else being any other fault, cast it away ; for it is the gratest Art in House-wifery to mixe these Wools aright, and to make the Cloth without blemish.

Of the oyling of Wool. Your Wool being thus mixed perfectly together, you shall then oyl it, or as the plain House-wife tearmes it, grease it, in this manner : being laid in a round flat bed, you shall take of the best Rape oyl, or for want thereof, either well clarified Goose-grease, or Swines-grease, and having melted it, with your hand sprinkle it all over your wool, and work it very well into the same ; then turn your wooll about, and do as much on the other side, till you have oyled all the Wool over, and that there is not a lock which is not moystned with the same.

The quantity of oyl. Now for as much as if you shall put too much oyle upon the Wool, you may thereby do great hurt to the Web, and make that the thread will not draw, but fall into many pieces, you shall therefore be sure at the first to give it little enough ; and taking some thereof, prove it upon the Wheel : And if you see it draw dry, and breaketh, then you may put more oyl unto it ; but if it draw well, then to keep it there without any alteration. But because you shall be a little more certain in the truth of your proportions, you shall know, that three pounds of grease or oyle, will sufficiently annoynt or grease ten pounds of Wool ; and so according to that proportion, you may oyl what quantity you will.

Of tumming wool. After your Wool is oyl'd and annoynted thus, you shall then tum it, which is, you shall put it forth as you did before when you mixed it, and card it over again upon your Stock cards : and then those Cardings which you strike off, are called tummings, which you shall lay by, till it come to a spinning. There be some House-wives which oyl it as they mixe it, and sprinkle every Lyr as they lay it, and work the oyle into it : and then roulding up as before said, pul it out and tum it ; so that then it goeth but once over the Stock-cards, which is not amisse ; yet the other is more certain, though somewhat painfull.

Of spinning wool. After your wool is thus mixed, oyled, and tummed, you shall

shall then spinne it upon great Wool-wheels, according to the order of good Housewifery : the actions whereof must be got by practice, and not relation ; only this, you shall be carefull to draw your thread according to the nature and goodnesse of your wool, not according to your particular desire ; for if you draw a fine thread from a wool which is of a coorse staple, it will want substance when it comes to the Walk mill, or either there beat in pieces, or not being able to bed, and cover the threads well, be a cloath of a very short lasting. So likewise if you draw a coorse thread from a Wool of a fine Staple, it will then so much over-thick, that you must either take away a great part of the substance of your wool in flocks ; or else let the cloth wear coorse and high, to the disgrace of the good Housewifery, and losse of much cloth, which else might have been saved.

Now for the diversities of spinning, although our ordinary English Housewife make none at all, but spin every thread alike, yet the better experienc'd make two manner of spinnings, and two sorts of thread ; the one they call warp, the other weft ; or else wooffe : warp is spun close, round and hard twisted, being strong and well smoothed, because it runs through the flutes, and also endureth the fretting and beating of the beam ; the weft is spun open, loose, hollow, and but halfe twisted ; neither smoothed with the hand, nor made of any great strength, because it only crosseth the warp, without any violent straining, and by reason of the softnesse thereof beddeth closer, and covereth the warp so well, that a very little beating in the mill, bringeth it to a perfect cloth : and though some hold it lesse substantial than the web, which is all of twisted yarn, yet experience finds they are deceived, and that this open weft keeps the cloth longer from fretting and wearing.

After the spinning of your wool, some Housewives use to wind it from the broch into round clews for more ease in the warping, but it is a labour may very well be saved, and you may as well warp it from the broch as from the clew, as long as you know the certain weight, for by that only you are to be directed in all manner of cloth walking.

The diversities of spinning.
Winding of woollen yarn.

Of warping
cloth.

Now as touching the warping of cloth, which is both the skill and action of the Weaver, yet must not our English Housewife be ignorant therein, but though the doing of the thing be not proper unto her, yet what is done must not be beyond her Knowledge, both to bridle the falshood of unconscionable Workmen, and for her own satisfaction, when she is rid of the doubt of anothers evil doing. It is necessary then that she first cast, by the weight of her Wool, to know to how many yards of cloth the Web will arise : for if the Wool be of a reasonable good staple, and well spun, it will run yard and pound, but if it be coarse, it will not run so much.

New in your warping also, you must look how many pounds you lay in your warp, and so many you must necessarily preserve for your weft : For House-wives say, the best cloth is made of even and even ; for to drive it to greater advantage is hurtful to the cloth. There be other observations in the warping of cloth ; as to number your Portusses, and how many goes to a yard : to look to the closeness and filling of the flie, and such like, which sometimes hold, and sometimes fail, according to the art of the workman ; and therefore I will not stand much upon them, but refer the Housewife to the instruction of her own experience.

Of weaving of
cloth, walking
and dressing it.

Now after your cloth is thus warped, and delivered up into the hands of the Weaver, the Housewife hath finish't her labour ; for in the Weaving, walking, and dressing thereof, she can challenge no property more than to entreat them severally to discharge their duties with a good conscience ; that is to say, that the Weaver weave close, strong, and true, that the Walker or Foller mill it carefully, and look well to his scowring earth, for fear of beating holes into the cloth ; and that the Clothworker or Sheer man burle and dress it sufficiently, neither cutting the Wool too unreasonable high, whereby the cloth may not wear rough, nor too low, lest it appear thred bare ere it come out of the hands of the Taylor.

Of linnen
cloth.

These things fore warn'd and performed, the cloth is then to be used at your pleasure.

The next thing to this, which our English Housewife must be

be skillful in, is the making of all sorts of Linnen cloth, whether it be of Hemp or Flaxe ; for from those two onely is the most principal cloth derived and made, both in this and in other Nations.

And first touching the Soyl fittest to sow Hemp upon, it must be a rich mingled earth of Clay and Sand, or Clay, and Gravel well temper'd ; and of these the best serveth best for that purpose ; for the simple Clay, or the simple Sand are nothing so good ; for the first is too tough, too rich, and too heavy, bringeth forth all Bm, and no Rind ; the other is too barren, too hot, and too light, and bringeth forth such slender withered increase, that it is nothing neer worth the labour. Briefly, then the best Earth is the mixt ground, which the Husbandman calls the red hazel ground, being wel-ordered and manur'd : and of this earth a principal place to sow Hemp on, is in old Stack-yards, or other places kept in the Winter time for the lair of Sheep or Cattel, when your ground is either scarce, or formerly not employed to that purpose ; but if it be where the ground is plenty, and onely used thereunto, as in *Holland* in *Lincolnshire*, the Isle of *Axon*, and such like places, then the custome of the Country will make you expert enough therein : There be some that will preserve the ends of their Corp-lands, which but upon grasse, to sow Hemp or Flax thereon, and for that purpose will manure it well with sheep ; for whereas Corn which butteth on grasse heds, where cattle are teathered, is commonly destroyed, and no profit issuing from a good part thereof ; by this means, that which is sown will be more safe and plentiful, and that which was destroyed, will bear a commodity of better value.

Now for the tillage or ordering of the ground where you sow Hemp or Flax, it would in all poynts be like that where you sow Barley, or at the least as often broke up, as you do when you sow Fallow wheat ; which is thrice at least, except it be some very mellow and ripe mould, as stack yards, and usual Hemp Lands be, and then twice breaking up is sufficient : that is to say, about the latter end of *February*, and the latter end of *April*, at which time you shall sow it : and herein

herein it is to be noted, that you must sow it reasonable thick with good sound and perfect seed, of which the smoothest, roundest, and brightest, with least dust in it, is best : you must not lay it too deep in the earth : but you must cover it close, light, and with so fine a mould as you can possibly break with your harrows, clodding beetles, or sleighting : then till you see it appear above the earth, you must have it exceedingly carefully tended, especially an hour or two before the Sun rise, and as much before its set ; for birds and other vermine, will otherwise pick the seed out of the earth, and so deceive you of your profit.

Of weeding
of Hemp and
Flax.

Now for the weeding of Hemp, you may save the labour, because it is naturally of it self swift of growth, rough, and venomous to any thing that grows under it, and will sooner of its own accord destroy those unwholsome weeds, than by your labour. But for your Flax or Line, which is a great deal more tender, and of harder increase, you shall as occasion serveth weed it, and trim it, especially if the weeds over grow it, but not otherwise : for if it once get above the weeds, then it will save it self.

The pulling
of Hemp or
Flax.

Touching the pulling of Hemp, or Flax, which is the manner of gathering of the same ; you shall understand that it must be pulled up by the roots, and not cut as Corn is, either with sicke or hook ; and the best time for the pulling of the same is, when you see the leaves fall downward, or turne yellow at the tops, for that is full ripe ; and this for the most part will be in *July*, and about *Mary Magdalins* day. I speak now touching the pulling of Hemp for cloth : but if you intend to save any for seed, then you shall save the principal buns, and let them stand till it be the latter end of *August* ; or sometime till mid *September* following ; and then seeing the seed turned brown and hard, you may gather it, for if it stand longer, it will shed sufficiently ; as for Flax, which ripeneth a little after the Hempt, you shall pull it as soon as you see the seed turn brown, and bend the head to the earth-ward, for it will afterward ripen of it self as the bus dryeth.

Now for the ripening and seasoning of Hemp or Flax, you shall

shall so soon as you have pulled it, lay it all along flat, and thinne upon the ground, for a day and a night at the most, and no more; and then as House-wives call it, tye it up in baits, and rear them upright till you can conveniently carry it to the water, which would be done as speedily as may be. Now there be some which do ripen their Hemp and Flaxe upon the ground where it grows, by letting it lye thereon to receive dewes and raine, and the movtneise of the earth, till it be ripe: but this is a vile and naughty way of ripening, it maketh the Hemp or Flaxe black, rough, and often rotten: therefore I would wish none to use it, but such as necessity compelleth thereunto, and then to be carefull to the often turning thereof, for it is the ground onely which rots it.

Now for the watering of the Hemp or Flax, the best water The watering of Hemp or Flax. is the running stream, and the worst the standing pit, yet because Hemp is a poysonous thing, and infecteth the water, and destroyeth all kind of fish, it is more fit to imploy such pits and ditches as are least subject to annoyance, except you live neer some great broad and swift streams, and then in the shallow parts thereof you may water without danger. Touching the manner of the watering thereof, you shall according to the quantity knock four or six strong stakes into the bottome of the water, and set them square wise, then lay your round baits or bundles of Hemp down under the water, the thick end of your bundle one way, and the thick end of another bundle another way; and so lay bait upon bait, till you have laid in all, and that the water covereth them all over; then you shall take over-lyers of wood, and binding them over-thwart to the stakes, keep the Hemp down close, and especially, at the four corners; then take great stones, gravel, and other heavy rubbish, and lay it between, and over the over-lyers, and so cover the Hemp close, that it may by no means stir, and so let it continue in the water four dayes and nights, if it be in a running water; but if it be in a standing water, then longer, and then take out one of the uppermost baits and wash it; and if in the washing you see the leaf come off, then you may be assured the Hemp is watered enough: as for Flax, less time will serve it, and it will shed the leaf in threenights.

When

Of washing
out of Hemp
or Flax.

When your Hemp or Flax is thus watered enough, you shall take off the gravel, stones, over-lyers of wood, and unloosing it from the stakes, take and wash out every bait or bundle severally by it self, and rub it exceeding clean, leaving not a leaf upon it, nor any filth within it; then set it upon the dry earth upright, that the water may drop from it, which done, load it up, and carry it home; and in some open close, or piece of ground rear it upright, either against hedges, pales, walls, back-sides of houses, or such like, where it may have the full strength or reflection of the Sun, and being thoroughly dried then house it; yet there be some House-wives which as soon as their Hemp comes from the water, will not rear it upright, but lay it upon the ground flat and thin for the space of a fennight, turning it at the end of every two dayes, first on the one side, then on the other, and then after rear it upright, dry it, and so house it: and this Housewifery is good and orderly.

Now although I have hitherto joyned Hemp and flax together, yet you shall understand that there are some particular differences between them; for whereas your Hemp may within a night or two after the pulling, be carried to the water, your flax may not, but must be reared up, and dried and withered a week or more to ripen the seed, which done, you must take ripple combs, and ripple your flax over, which is the beating or breaking off from the stalks the round bolls or bobs which contain the seed, which you must preserve in some dry vessel or place till the spring of the year, and then beat it, or thresh it for your use, and when your flax or line is ripled, then you must send it to the water as aforesaid.

After your Hemp or Flax hath been watered, dried, and lashed, you may then at your pleasure break it, which is in a brake of wood (whose proportion is so ordinary, that every one almost knows them) then breake and beat out the dry boll or hexe of the Hemp or Flax from the rind which covers it, and when you brake either, you shall do it as neerer you can, on a fair dry Sun-shine day, observing to set forth your Hemp and Flax, and spread it thin before the Sun, that it may be as dry as tinder before it come to the brake; for it is either

either in the lying close together it shall give again or sweat or through the moistnesse of the ayre, or place where it lyes, receives any dampishnesse: you must necessarily receive it dried sufficiently again, or else it will never brake well, nor the bun break and fall from the rinde in order as it should.

Therefore, if the weather be not seasonable, and your need much to use your Hemp or Flaxe, you shall then spread it upon your Kilne, and making a soft fire under it, dry it upon the same, and then brake it: yet for as much as this is oft times dangerous, and much hurt hath been received thereby through casualty of fire, I would wish you to stick four stakes in the earth at least five foot above ground, and laying over them small over layers of wood, and open fleaks or hurdles upon the same; spread your Hemp, and also rear some round about it all, but at one open side; then with straw, small shavings, or other light dry wood make a soft fire under the same, and so dry it, and brake it, and this without all danger or mistrust of evill; and as you brake it, you shall open and look into it, ever beginning to break the root ends first; and when you see the bun is sufficiently crushed, fallen away, or at the most hangeth but in very small shivers within the Hemp or Flax, then you shall say, it is brak't enough, and then turning that which you called a Baite or Bundle before, now a strike, you shall lay them together, and so house them, keeping in your memory either by score or writing, how many strikes of Hemp, and how many strikes of Flaxe you brake up every day.

The drying of hemp or flax.

Now that your Hemp or Flax may brake so much the better, you must have for each severall sort two severall brakes, which is an open and wide toothed, or nickt brake, and a close and straight toothed brake: the first being to crush the bun, and the latter to beat it forth. Now for Flax, you must take first that which is the straighter for the Hempe, and then after, one of purpose, much straighter and sharper: for the bun of it being more small, tough, and thin, must necessarily be broken into much lesse pieces.

Diversity of brakes.

After your Hemp and Flax is brak't, you shall then swing'e it, which is upon a swingle-tree block, made of an half inch board

board about four foot above ground, and set upon a strong foot or stock, that will not easily move and stir, as you may see in any House-wives house whatsoever, better than my words can expresse: and with a piece of wood called the swingle-tree dagger, made in the shape and proportion of an old dagger, with a reasonable blunt edge; you shall beat out all the loose buns and shivers that hang in the hemp or flaxe, opening and turning it from one end to the other, till you have no bun or shiver to be perceived therein, and then striking a twist, and fould in the midst, which is ever the thickest part of the strike, lay them by till you have swingled all; the generall profit whereof, is not only the beating out of the hard bun, but also an opening and softning of the tear, whereby it is prepared and made ready for the Market.

Now after you have swingled your Hemp and Flaxe over once, you shall take and shape up the refuse stuffe which you beat from the same severally, and not only it, but the tops and knots, and half brackt bun, which fall from the brake also; and drying them againe, cause them to be very well thrashed with flayls, and then mixing them with the refuse which fell from the swingle tree, dresse them all well with threshing and shaking, till the buns be clean driven out of them; and then lay them in some safe dry place till occasion of use: these are called swingle-tree hurds, and that which comes from the Hemp will make window-cloth, and such like coorse stuff, and that which comes from the flax, being a little towed again in a pair of wool cards, will make a coorse harding.

But to proceed forward in the making of cloth, after your hemp or flaxe hath been swingled once over, which is sufficient for the market, and for ordinary sale; you shall then for cloth, swingle it over the second time, and as the first did beat away the bun, and soften the rind, so this shall break and divide, and prepare it fit for the heckle; and hurds which are this second time beaten off, you shall also save: for that of the Hemp, (being towed in wool cards) will make a good hempen harding, and that which commeth from the flaxe (used in that manner) a flaxe harding, better than the former.

Of beating
Hemp.

After the second swingling of your Hemp, and that the
hurds

hards thereof have been laid by, you shall take the strikes, and dividing them into dozens, and half dozens, make them up into great thick roles; and then as it were broaching them, or spitting them upon long sticks, set them in the corner of some chimney, where they may receive the heat of the fire, and there let them abide, till they be dried exceedingly, then take them, and laying them in a round trough made for the purpose, so many as may conveniently lye therein, and there with beetles beat them exceedingly, till they handle both without and within as soft and pliant as may be, without any hardnesse or roughnesse to be felt or perceived; then take them from the trough and open the roler, and divide the strikes severally as at the first, and if any be insufficiently beaten, role them up, and beat them over as before.

When your Hemp hath been twice swingled, dried, and beaten, you shall then bring it to the heckle, which instrument needeth no demonstration, because it is hardly unknown to any woman whatsoever: and the first heckl shall be coorse open and wide toothed, because it is the first breaker or divider of the fibres, and the layer of the strikes even and straight: and the hards which come of this heckling, you shall mix with those of the latter swingling, and it will make the cloth much better; then you shall heckle it the second time through a good straight heckle, made purposely for Hemp, and be sure to break it very well and sufficiently thereupon, and save both the hards by themselves, and the strikes by themselves in severall places.

Of heckling
Hemp.

Now there be some very principall good House-wives, which use only but to heckle their hemp once over, affirming, that if it be sufficiently dried and beaten, that once going over thorough a straight heckle, will serve without more losse of labour, having been twice swingled before.

Now if you intend to have an excellent piece of Hempen cloth, which shall equall a piece of very pure Linnen; then after you have beaten it, as before said, and heckled it once over, you shall then roule it up againe, dry it as before, and beat it againe as much as at the first; then heckle it through a fine linen heckle, and the Towse which falls from the heckle, will make a principall hemping, but it the teare it selfe a cloth as pure as fine House-wives Linnen, the indurance and lasting where-
of

of is rare and wonderfull : thus you see the uttermost art in dressing of hemp , for each severall purpose in cloth-making, till it come to the spinning.

The dressing of flax to the finest use. Flaxe after it hath been twice swingled , needeth neither more drying nor beating as hemp doth , but may be brought to the heckle in the same manner as you did hemp ; onely the heckle must be much finer and straighter ; and as you did before , the first heckle being much coarser than the latter , holding the strike stiffe in your hand , break it very well upon that heckle ; then the hards which comes thereof , you shall save to make fine harden cloth of, and the strike it selfe , you shall passe thorough a finer heckle ; and the hards, which come from thence, you shall save to make fine middlen cloth of, and the teare it selfe for the best Linnen.

To dresse flax for the finest use that may be , as to make faire Holland cloth of great price , or thread for the most curious purpose , a secret hitherto, almost concealed from the best *House-wives* with us , you shall take your flax after it hath been handled, as is before shewed , and laying three strikes together, plat them in a plat of three , so hard and close together as is possible, joyning one to the end of another , till you have plated so much as you think convenient , and then begin another plat , and thus plat as many severall plats as you think will make a roule , like unto one of your hemp roubles before spoke of, and then wreathing them hard together , make up the roule ; and so many roubles more or lesse , according to the purpose you dresse them for : this done , put the roubles into a hempe-trough, and beat them soundly , rather more than lesse than the hempe : and then open and unplat it , and divide every strike from the other , very carefully ; then heckle it through a finer heckle than any formerly used : for of heckles there be ever three sorts , and this must be the finest : and in this heckling , you must be exceeding careful to do it gently, lightly, and with good deliberation , lest what you heckle from it should run to knots, or other hardnesse , as it is apt to doe : but being done artificially as it ought, you shall see it look, and feel it handle like fine soft Cotton , or Persian wool ; and this which thus looketh and feelth , and falleth from the heckle, will notwithstanding make a pure Linnen , and run at least

least two yards and a half in the pound ; but the teare it selfe will make a perfect strong , and most fine holland , running at least five yards in the pound.

After your teare is thus drest , you shall spin it either upon wheel or rock , but the wheel is the swifter way , and the rock maketh the finer thread ; you shall draw your thread according to the nature of the teare , and as long as it is even , it cannot be too small , but if it be uneven , it will never make a durable Cloath. Now for as much as every House-wife is not able to spin her owne teare in her owne house , you shall make choise of the best Spinners you can hear of , and to them put forth your teare to spin , weighing it before it go , and weighing it after it is spun and dry , allowing weight for weight , or an ounce and a halfe for waste at the most : as for the prices for spinning , they are according to the natures of the Countrey , the fineness of the teare , and the dearness of provisions : some spinning by the pound , some by the lay , and some by the day , as the bargain shall be made.

After your yarn is spun upon spindles , spools , or such like , Or reeling of
you shall then reel it upon reels , of which the reels which are yarn.
hardly two foot in length , and have but onely two contrary
cross-bares , are the best , the most easie , and lesse to be troubled
with raveling ; and in the weaving of your fine yarn , to keep it
the better from raveling , you shall as you reel it , with a Ley-
band of a big twist . divide the slipping or skeane into divers
Leyes , allowing to every Ley eighty threads , and twenty
Leyes to every slipping , the yarne being very fine , otherwise
less of both kinds : but if you spin by the Ley , as at a pound
of Ley or so , then the ancient custome hath been to allow to
the reele which was eight yards , at above 160 threads to every
Ley , and 25. Leyes , and sometimes 30. Leyes to a slipping ,
which will ordinarily amount to a pound or thereabouts ; and
so by that you may proportion forth the price for any manner of
spinning whatsoever ; for if the best thus , then the second so
much bated , and so accordingly the worst.

After thus your yarn is spun and reeld , being in the slip-Of the scow-
pings you shall scowr it : Therefore , first to fetch out the spots , ring of yarn.
you shall lay it in luke-warm water , and let it lye so three or

four dayes, each day shifting it once, and wringing it out, and laying it in another water of the same nature; then carry it to a well or brook, and there rinse it, till you see that nothing commeth from it, but pure clean water; for whilest there is any filth within it, there will never be white cloth; which done, take a bucking tub, and cover the bottome thereof with very fine Athen-ashes: then opening your slippings, and spreading them, lay them on those Ashes, then cover those slippings with ashes againe, then lay in more slippings, and cover them with ashes as before, and thus lay one upon another, till all your yarn be laid in; then cover the uppermost yarne with a bucking cloth, and lay therein a peck or two, (according to the bignesse of the tub) of ashes more, then powre into all through the uppermost cloth so much warme water, till the tub can receive no more; and so let it stand all night. the next morning you shall set a Kettle of clean water on the fire; and when it is warme, you shall pull out the spigget of the bucking tub, and let the water therein run into another clean vessel; and as the bucking tub wasteth, so you shall fill it up againe with the warme water on the fire, and as the water on the fire wasteth, so you shall fill it up againe with the lie which commeth from the bucking tub, ever observing to make the lie hotter and hotter till it seeth; and then when it so seetheth, you shall as before apply it with boyling lie, at least four houres together, which is called, the driving of a buck of yarn: All which being done, you shall take off the Bucking cloth, and then putting the yarne with the Lie-ashes into large Tubbs or Bowles, with your hands as hot as you can suffer it to posse, and labour the yarne, ashes, and Lie, a pretty while together; then carry it to a Well, River, or other clean scouring water, and there rinse it as clean as may be from the ashes; then take it, and hang it up upon poles abroad in the ayre all day, and at night take the slippings downe, and lay them in water all night, then the next day hang them up againe, and if any part of them dry, then cast water upon them, observing ever to turn that side outmost which whiteth flowst and thus doe at least seven dayes together; then put all the yarne againe into a Bucking-Tub without ashes, and cover it

Whiking of
yarn.

it as before with a Bucking cloth, and lay thereupon good store of fresh ashes, and drive that buck as you did before, with very strong seething Lies, the space of half a day or more; then take it forth, possit it, rinse it, and hang it up as you did before on the dayes and laying it in water on the nights another week, and then wash it over in fair water, and so dry it up.

Other wayes there are of scourings and whiting of yarn; as scouring it in bran and warm water, and then boyling it with old flitches, wheat straw, water, and ashes and then passing, rinsing, and bleaching it upon hedges or bushes; but it is a foul and uncertain way, and I would not wish any good Whiting to use it.

After your yarn is scoured and whited, you shall then wind it up into round balls of a reasonable bignesse, rather without bottom then with any at all, because it may deceive you in the weight; for according to the pounds will arise your yards and lengths of cloth.

After your yarn is wound and weighed, you shall carry it to the Weavers, and wrap it as was before shewed for wollen cloth, knowing this, that if your Weaver be honest and skilfull he will make you good and perfect cloth of even and even, that is just the same weight it was, that there was in warp: As for the art and mystery of Weaving, it is the work-mans occupation, and therefore to him I refer it.

After your cloth is woven and the Web or Webs come home, The scouring you shall first lay it to steep in all points as you did your yarn, and whiting to it, then scouring and other filtn, which is gathered from the Weaver, then rinse it as you did your yarn, then buck it with Lie and Ashes, as before said, and rinsing, and then having Loops in to the side edge of the cloth, spread it upon the grass, and strike it down at the uttermost length and breadth, and as it is a drier, water it again, but take heed you wet it not too much, for fear you mildew or rot it; neither cast water upon it, till you see it in a manner dry, and before weekly to rise it first on one side, and then on the other, and at the end of that week, you shall buck it as before in Lie and Ashes again, then rinse it, spread it, and water it as before; then if you see it whiter space, you need not to give it any more bucks with

the ashes and the cloth mixt together, but then a couple of clean bucks, (as was before shewed in the yarn) the next fortnight following: and then being whiten'd enough, dry up the cloth and use it as occasion shall require: the best season for the same whitening, being *April* and *May*. Now the coorse and worst House-wives, scour and white their cloth with water and bran, and buck it with lie and green hemlocks: but, as before I said, it is not good, neither would I have it put in practise. And thus much for wool, hemp, flax, and cloth of each severall substance.

CHAP. VI.

Of Dairies, Butter, Cheese, and the necessary things belonging to that Office.

THere followeth now in this place after these knowledges already rehearsed, the ordering and Government of Dairies, with the profits and commodities belonging to the same. And first touching the stock wherewith to furnish Dairies, it is to be understood, that they must be Kine of the best choice and breed that our *English House-wives* can possibly attain unto, as of big bone, fair shape, right bred, and deep of milk, gentle, and kindly.

Bignesse of
Kine.

Touching the bignesse of bone, the larger that every Cow is, the better she is: for when either age or mischance shall disable her for the pail, being of large bone she may be fed and made fit for the shambles, and so no loss but profit, and an other to the pail, as good and sufficient as her selfe.

For her shape, it must a little differ from the Butchers rules: for being chose for the Dairy, she must have all the signes of plenty of milk; as a crumpled horn, a thin neck, a hairy dreg-lap, and a very large udder, with four teates, long, thick, and sharp at the ends; for the most part either all white, or of what colour soever the Cow be, or at least the fore part thereof: and if it be well hair'd before and behind, and smooth in the bottom, it is a good signe.

The breed of
Kine.

As touching the right breed of Kine through our Nation,

it generally affordeth very good ones, yet some Countries do far exceed other Countries, as *Cheshire, Lancashire, Yorkshire,* and *Derbyshire*, for black Kine; *Glocestershire, Somersetshire,* and some part of *Wiltshire*, for red Kine; and *Lincolnshire* for pide Kine: and from the breeds of these Countries generally doe proceed the breeds of all other, howsoever dispersed over the whole Kingdome. Now for our Housewifes directions, she shall chuse her *Dairy* from any of the best breeds before named, according as her opinion and delight shall govern her, onely observing not to mixe her breeds of divers kinds, but to have all of one intire choyce without variation, because it is unprofitable; neither must you by any means have your Bull a foreiner from your Kine, but either of one Country, or of one shape and colour: Again, in the choice of your Kine, you must look diligently to the goodnesse and fertility of the soyl wherein you live, and by all meanes buy no Kine from a place that is more fruitful than your own, but rather harder; for the latter will prosper and come on, the other will decay and fall into diseases; as the pilling of blood and such like. For which disease, and all other you may find assured cures in the former book, called *Chenp and good*.

For the depth of milk in Kine (which is the giving of most milk) being the main of a Housewifes profit, she shall be very careful to have that quality in her beasts. Now those Kine are said to be deepest of milk, which are new hare; that is, which have but lately calved, and have their milke deepe springing in their Udders, for at that she giveth the most milke; and if the quantity then be not convenient, doublelesse the Cow cannot be said to be of deep milke; and for the quantity of milke, for a Cow to give two gallons at a meal, is rare and extraordinary; to give a gallon and a halfe is much and convenient, and to give but a gallon certain; is not to be found fault with: Again, these Kine are said to be deep of milke, which though they give not so exceeding much milke as others yet they give a reasonable quantity, and give it long, as all the year through, whereas other Kine that give more in quantity, will go dry, being with Calf, some three months, some two, and some one, but these will give their

Of the going
dry of Kine.

usuall measure, even the night before they Calve ; and therefore are said to be Kine, deep of milke. Now for the retained opinion, that the Cow which goeth not dry at all, or very little, bringeth not forth so good a Calf as the other because it wanteth much of the nourishment it should enjoy, it is vain and frivolous ; for, should the substance from whence the milk proceedeth convert to the other intended nourishment, it would be so superabundant, that it would convert either to disease or putrification ; but letting these secret reasons passe, there be some Kine which are so exceedingly full of milk, that they must be milkt at least thrice a day, at morning, Noon, and Evening, or else they will shed their milk ; but it is a fault rather than a vertue, and proceedeth more from a laxativeness or looseness of milk, than from any abundance ; for I never saw those three meals yet, equal the two meals of a good Cow ; and therefore they are not truly called deep of milk.

Touching the gentleness of Kine, it is a vertue as fit to be expected as any other ; for if she be not affable to the Maid, gentle and willing to come to the pail, and patient to have her dugged drawn without skittishness, striking or wildness, she is utterly unfit for the dairy.

Of kindliness
in Kine.

As a Cow must be gentle to her milker, so she must be kind in her own nature ; that is, apt to conceive, and bring forth, fruitfull to nourish, and loving to that which springs from her ; for so she bringeth forth a double profit, the one for the time present which is in the dairy, the other for the time to come, which is in the maintenance of the stock, and upholding of breed.

The best time
to calve in, for
the Dairy, or
breed.

The best time for a Cow to Calve in for the Dairy, is in the latter end of *March*, and all *April* for then grass beginneth to spring to its perfect goodnesse which will occasion the greatest increase of milk that may be, and one good early Cow will countervail two latter, yet the Calves thus calved are not to be reared, but suffered to feed upon their Damms best milk, and then to be sold to the Butchers, and surely the profit will equal the charge ; but those Calves which fall in *October* *November*, or any time of the depth of Winter may well be reared

reared up for breed, because the main profit of the Dairy is then spent, and such breed will hold up any Calves which are calved in the prime daies, for they generally are subject to the disease of the sturdy, which is dangerous and mortal.

The Housewife which onely hath respect to her Dairy, and for whose knowledge this discourse is written (for wee have shewed the Grasier his Office in the English Husbandman) must rear her calves upon the finger with flotten milke, and not suffer them to run with their dammes: the generall manner whereof, and the cure of all the diseases incident to them, and all other Cattel is fully declared in the Book called *Cheape and Good*.

Rearing of Calves.

To proceed then to the generall use of Dairies, it consisteth first in the Cattel (of which we have spoke sufficiently) then in the houres of milking, the ordering of the milk, and the profits arising from the same. The best and most commended hours for milking, are indeed but two in the day; that in the Spring and Summer time which is the best season for the Dairy, is betwixt five and sixe in the morning, and six and seven a clock in the evening; and although nice and curious Housewives will have a third hour betwixt them, as between twelve and one in the afternoon, yet the better experienc'd do not allow it, and say as I believe, that two good meals of milk are better ever than three bad ones; also in the milking of a Cow, the woman must sit on the neer side of the Cow, she must gently at the first handle and stretch her dugges, and moist n them with milk that they may yield out the milk the better, and with lesse pain; she shall not settle her self to milk, nor fixe her paille firme to the ground till she see the Cow stand sure and firme, but be ready upon any motion of the Cow to save her pail from over-turning: when she seeth all things answerable to her desire, she shall then milk the Cow boldly, and not leaving stretching and straining of her teates, till not one drop of milk more will come from them; for the worst point of Housewifery that can be, is so leave a Cow halfe milke; for besides the losse of the milk, it is the only way to make a Cow dry, and utterly unprofitable for the Dairy. The Milkmaid whilst she is in milking, shall do nothing rashly or sud-

The general use of Dairies.

The hours of milking.

suddenly about the Cow, which may fright or amaze her ; but as she came gently, so with all gentleness she shall depart.

Ordering of
milk.

Touching the well-ordering of milke after it is come home to the Dairy the maine point belonging thereunto is the House-wifes cleanness, in the sweet and neat keeping of the Dairy-house, where not the least mote of any filth may by any means appear, but all things either to the eye or nose so void of fowrenness or stinkiness, that a Princes Bed chamber must not exceed it: to this must be added, the sweet and delicate keeping of her milk vessels, whether they be of wood, earth, or lead, the best as yet is dispatchable with the best House-wives ; onely this opinion is generally received, that the wooden vessel, which is round and shallow, is best in cold vaults, the earthen vessels principal for long keeping, and the leaden vessel for yeelding of much Cream : but howsoever, any and all these must be carefully scalded once a day, and set in the open ayr to sweeten, lest getting any taint of fowrenesse into them, they corrupt the milk that shall be put therein.

Ordering of
milk vessels.

Syiling of
milk.

But to proceed to my purpose, after your milk is come home, you shall as it were strain it from all unclean things, through a neat and sweet kept Syledish, the forme whereof every House-wife knows ; and the bottome of this Syle through which the milk must passe, must be covered with a very clean wishe fine linnen cloath, such an one as will not suffer the least mote or hair to go through it : you shall into every vessel soyl put a pretty quantity of milk, according to the proportion of the vessel, the broader it is, and the shallower it is, the better it is, and yeeldeth ever the most Creame, and keepeth the milke long st from fowring.

Profits arising
from milke.

Now for the profits arising from milke, they are three of especial account, as Butter, Cheese, and Milk, to be eaten simple or compounded : as for Cuds, fowr Milk, or Whigs, they come from secondary meanes, and therefore may not be numbred with these.

Of Butter.

For your butter which only proceedeth from the Cream, which is the very heart and strength of Milke, it must be gathered very carefully, diligently, and painfully : And though
cleanli

cleanliness be such an Ornament to a Housewife, that if she want any part thereof, she loseth both that and all good names else: yet in this action it must be more seriously imployed than in any other.

To begin then with the *skimming* or gathering of your Cream *Of skimming*
from the Milk, you shall do it in this manner: The Milk which *Cream.*
you do milk in the morning, you shall with a fine thin shallow
dish, made for the purpose, take off the Cream about five of the
Clock in the Evening; and the Milk which you did milk in the
Evening you shall *skim* and take off the Cream about five of
the Clock the next morning; and the Cream so taken off, you
shall put into a clean sweet and well leaded earthen pot close
covered, and set it in a close place; and this Cream so gathered, *Of keeping*
you shall not keep above two dayes in the Summer, and not a- *Cream.*
bove ten in the Winter. if you will have the sweetest and best but-
ter, and that your Dairy contain but five Kine no more; but
how many or few soever you keep, you shall not by any means
preserve your Cream above three dayes in Summer, and not above
six in the Winter.

Your Cream being neatly and sweet kept, you shall *churn* *Of churning*
or churn it on those usual dayes which are fittest either for *butter, and*
your use in the house, or the Markets adjoyning near unto you, *the dayes.*
according to the purpose for which you keep your Dairy.
Now the dayes most accustomably held amongst ordinary
Housewives, are Tuesday and Friday: Tuesday in the after-
noon, to serve Wednesday morning market, and Friday
morning to serve Saturday market; for Wednesday and Sa-
turday are the most general market dayes of this Kingdom,
and Wednesday, Friday, and Saturday, the usuall fasting
dayes of the week, and so most fit for the use of Butter. Now
for Churning, take your Cream, and through a strong and
clean cloath strain it into the Churn; and then covering the
Churn close, and setting it in a place fit for the action in
which you are imployed; as in the Summer, in the coolest
place of your Dairy, and exceeding early in the morning, or
very late in the Evening: And in the Winter, in the warmest
place of your Dairy, and in the most temperate hours, as a-
bout noon, or a little before or after, and so Churn it with
swift

swift strokes, marring the noise of the same, which will be solid, heavy, and entire, until you hear it alter, and the sound is light, sharp, and more spiridly; and then you shall say that your butter breaks, which perceived both by this sound, the lightness of the churn stuffe, and the sparks and drops which will appear yellow about the lid of the Churn; then cleanse with your hand both the lidde and the inward side of the churn, and having put all together, you shall cover the churn again, and then with easie strokes round and not to the bottome, gather the butter together into one intire lump and body, leaving no pieces thereof several or unjoyned.

Helps in
churning.

Now forasmuch as ther. be many mischiefs and inconveniences which may happen to butter in the churning. because it is a body of much tendernes, and neither will indure much heat nor much cold; for if it be over-heated, it will look white, crumble, and be bitter in taste; and if it be over-cold it will not come at all, but will make you waste much labour in vain: which faults to help, if you churme your butter in the heat of Summer it shall not be amisse, if during the time of your churning, you place your churme in a pail of cold water; as deep as your Cream riseth in the churn, and in the churning thereof let your strokes goe slow and be sure that your churn be cold when you put in your Cream: but if you churn in the coldest time of Winter, you shall then put in your Cream before the churn be cold, after it hath been scalded, you shall place it within the air of the fire, and churn it with as swift strokes, and as fast as may be, for the much labouring of it will keep it in a continual warmth, and thus you shall have your butter good, sweet, and according to your wish. After your butter is churn'd, or churn'd and gathered well together in your churn, you shall then open your churn, and with both your hands gather it well together, and take it from the butter milke, and put it into a very clean bowl of wood, or pansion of earth sweetned for the purpose. and if you intend to spend the butter sweet and fresh, you shall have your bowl or pansion filled with very clean water, and therein with your hand you shall work the butter, turning and rolling it

The handling
of butter.

to and fro, till you have by that labour beaten and washt out all the butter milk, and brought the butter to a firme substance of it self, without any other moysture ; which done, you shall take the butter from the water, and with a point of a knife scotch and slice the batter over and over every way, as thick as is possible, leaving no part through which your knife must not pass ; for this will cleanse and fetch out the smallest hair or mote, or rag of a strainer, and any other thing which by casual means may happen to fall into it.

After this you shall spread the butter in a bowl thin, and take so much salt as you can think convenient, which must by no means be much for sweet butter, and sprinkle it thereupon ; then with your hands work the butter and the Salt exceeding well together, and then make it up either into dishes, pounds, or half pounds at your pleasure.

If during the month of May, before you salt your butter you save a lump thereof, and put it into a vessel, and so set it into the Sun the space of that month, you shall find it exceeding sovereign and medicinable for wounds, strains, aches, and such like grievances. Of May Butter.

Touching the powdring up, or potting of butter, you shall by no means, as in fresh butter, wash the butter milk out with water, but only work it cleer out with your hands : for water will make the butter rusty, or reese : this done, you shall weigh your butter, and know how many pounds there is thereof : for should you weigh it after it were salted, you would be much deceived in the weight ; which done you shall open the butter, and salt it very well and thoroughly, beating it in with your hand till it be generally dispersed through the whole butter : then take clean earthen pots, exceedingly well leaded, lest the brine should leak through the same, and cast salt into the bottome of it : then lay in your butter, and presse it down hard within the same ; and when your pot is filled, then cover the top thereof with salt, so as no butter be seen : then closing up the pot let it stand where it may be cold and safe : but if your Dairy be so little that you cannot at first fill up the pot, you shall then when you have potted up so much as you have, cover it all over with salt, and put the next quantity upon it till the pot be full.

Now

Now there be Housewives whose Dairies are great, can by no means conveniently have their butter contain'd in pots, as in *Holland, Suffolk, Norfolk*, and such like, and therefore are fitt to take barrels very close and well made; and after they have salted it well, they fill their barrels therewith; then they take a small stick clean, and sweet, and therewith make divers holes down through the butter, even to the bottome of the barrel; and then make a strong brine of water and salt which will bear an Egg, and after it is well boyld, well skimm'd and cool'd, then pour it upon the top of the butter, till it swim above the same, and so let it settle. Some use to boyl in this brine a branch or two of *Rosmary*, and it is not amisse, but pleasant and wholesome.

When to pot
butter.

Now although you may at any time betwixt *May* and *September* pot up butter, observing to doe it in the coolest time of the morning; yet the most principal season of all is in the month of *May* only; for then the ayre is most temperate, and the butter will take salt the best, and the least subject to ranciness.

The best use of butter milk for the ablest House-wife is Charitably to bestow it on the poor neighbours, whose wants doe daily crye out for sustenance; and no doubt but she shall find the profit thereof in a divine place, as well as in her earthly businesse. But if her own wants command her to use it for her own good, then she shall of her butter milk make Curds, in this manner: she shall take her butter milk and put it into a clean earthen vessel, which is much larger than to receive the butter-milk onely; and looking into the quantity thereof, she shall take as it were a third part so much of new milk, and set it on the fire, and when it is ready to rise, take it off, and let it cool a little; then powr it into the butter milk in the same manner as you would make a posset, and having stirred it about, let it stand; then with a fine skimmer, when you will use the curds (for the longer it stands, the better the curds will be) take them up into a Cullander, and let the whey drop well from it, and then eat them either with Cream, Ale, Wine, or Beer; as for the Whey, you may keep it also in a sweet stone vessel; for it is that which is called Whey, and

and it is an excellent cool drink, and wholesome, and may very well be drunk a summer through, in stead of a y other drink; and without doubt, will slake the thirst of any labouring man as well, if not better.

The next main profit which ariseth from the Dairy, is Of Cheese.
Cheese, of which there be divers kinds, as new milk, or morning milk Cheese, Nettle cheese, Floaten-milk-cheese, and Eddish, or After-math-cheese, all which have their severall orderings and compositions, as you shall perceive by the discourse following. Yet before I do beginne to speak of the making of the Cheese, I will shew you how to order your *Cheesep-bag* or *Runnet*, which is the most principal thing wherewith your Cheese is compounded, and giveth the perfect taste unto the same.

The *Cheesep-bag*, or *Runnet*, is the *stomach-bag* of a Of the cheesep-bag or Runnet.
young sucking Calf, which never tasted other food than milk, where the curd lyeth undigested. Of these bags you shall in the beginning of the year, provide your selfe good store, and first open the bag, and powre out into a clean vessel the curd and thick substance thereof; but the rest which is not curdled you shall put away: then open the curd and pick out of it all manner of mores, chiers of grasse, or other filth gotten into the same: then wash the curd in so many cold waters, till it be as white and clean from all sorts of moates as is possible; then lay it on a clean cloth that the water may draine from it, which done, lay it in another dry vessel; then take a handfull or two of salt, and rub the curd therewith exceedingly, then take your bag, and wash it also in divers cold waters till it be very clean, and then put the curd and the salt up into the bag, the bag being also well rub'd within with salt; and so put it up, and salt the outside also over, and then close up the port close, and so keep them a full year before you use them. For touching the hanging of them up in chimney corners, (as some rickish-wives doe) it is foolish, naught, and unwholsome: and the spending of your Runnet whilst it is new, makes your Cheese heavy, and to prove hollow.

When your Runnet or Earning is fit to be used, you shall season

season it after this manner; you shall take the bag you intend to use, and opening it, put the curd into a stone mortar or a bowle, and with a wooden pestle, or a rolling pin beat it exceedingly; then put to it the yolks of two or three eggs, and half a pint of the thickest and sweetest cream you can fetch from your milk, with a penny worth of Saffron finely dried and beaten to powder, together with a little Clove, and Mace, and stirre them all passing well together, till they appear but as one substance, and then put it up in the bag againe: then you shall make a very strong brine of water and salt, and in the same you shall boyle a handful of Savifrage, and then when it is cold, clear it into a clean earthen vessel: then take out of the bag half a dozen spoonfuls of the former curd, and mixe it with the brine; then closing the bag up againe close, hang it with the brine, and in any case also steep in your brine a few Walnut-tree leaves, and so keep your Runnet fortnight after before you use it; and in this manner, driff all your bags so, as you may ever have one ready after another, and the youngest a fortnight old ever at the least; for that will make the earning quick and sherp, so that five spoonfuls thereof will suffice for the gathering and seasoning of at least twelve Gallons of milk, and this is the choyest and best earning which can possible be made by any Housewife.

To make a new milk or morning milk cheese, which is the best cheese made ordinarily in our Kingdom; you shall take your milk early in the morning, as it comes from the Cow, and syle it into a cleane Tub; then take all the Cream also from the milke you milke'd the evening before, and straine it into your new milk: then take a pretty quantity of cleane water, and having made it scalding hot, pour it into the milke, also to scald the cream and it together: then let it stand, and cool it with a dish till it be no more than luke-warm; then goe to the pot where your earning bags hang, and draw from thence so much of the earning without stirring of the bag, as will serve for your proportion of milk, and strain it therein very carefully; for if the least mote of the end of the earning fall into the cheese, it will make the cheese rot and
mould;

mould ; when your curd is put in , you shall cover the milk , and so let it stand half an hour or thereabout ; for if the curd be good , it will come in that space ; but if you see it doth not , then you shall put in more : being come, you shall with a dish in your hand break and mash the curd together, pressing and turning it diversly : which done , with the palms of your hands very gently presse the curd downe into the bottome of the Tub ; then with a thin dish take the whey from it as cleare as you can , and so having prepared your Cheese-fat answerable to the proportion of your curd, with both your hands joyned together , put your curd therein and break it , and presse it down hard into the fat, till you have fill'd it ; then lay upon the top of the curd your hard cheese-board, and a little small weight thereupon , that the whey may drop from it into the under vessel ; when it hath done dropping, take a large Cheese-cloth , and having wet it in the cold water , lay it on the Cheese-board, and then turn the Cheese upon it ; then lay the cloth into the Cheese-fat, and so put the Cheese therein againe , and with a thinner cloth thrust the same down close on every side : then laying the cloth also over the top to lay on the Cheese board , and carry it to your great presse , and there presse it under a sufficient weight : after it hath been there prest half an hour , you shall take it, and turn it into a dry cloth , and put it into the presse againe , and thus you shall turne it into dry cloths at least five or six times in the first day , and ever put it under the presse againe , not taking it therefrom till the next day in the evening at soonest , and the last time it is turned , you shall turne it into the dry fat without any cloth at all.

When it is prest sufficiently , and taken from the fat, you shall then lay it in a Kimmel , and rub it first on the one side, and then on the other with salt , and so let it lie all that night, then the next morning you shall doe the like againe , and so turn it out upon the brine , which comes from the salt two or three dayes more , according to the bignesse of the Cheese, and then lay it upon a fair Table or shelf to dry , forgetting not every day once to rub it all over with a clean cloth, and

and then to turn it till such time that it be thoroughly dry, and fit to go into the Cheefe-buck: and in this manner of drying, you must observe to lay it first where it may dry hastily, and after where it may dry at more leasure: thus may you make the best and most principal Cheefe.

A cheefe of
two meales.

Now if you will make a Cheefe of two meales, as your mornings new milke, and the evenings cream milke, all you shall do, is but the same formerly rehearsed. And if you will make a simple morning milke Cheefe, which is all of new milke, and nothing else, you shall then do as is before declared, onely you shall put in your earning so soon as the milke is fild, (if it have any warm milke) and not scald it: but if the warmth be lost, you shall put it into a kettle and give it the air of the fire.

Cheefe of one
meale.

Of Nettle
cheefe.

If you will have a very dainty nettle Cheefe, which is the finest summer cheefe which can be eaten, you shall doe small things as was formerly taught in the new milke cheefe compound: Onely you shall put the curd into a very thin Cheesefat, not above half an inch, or a little better deep at the most, and then when you come to dry them, as soon as it is drained from the brine, you shall lay it upon fresh nettles, and cover it all over with the same, and so lying where they may feel the aire, let them ripen therein, observing to renew your nettles once in two dayes, and every time you renew them, to turn the Cheefe or Cheeses, and to gather your nettles as much without stalkes as may be, and to make the bed both under and above as smooth as may be, for the more even and fewer wrinkles that your cheefe hath, the more dainty is your House-wife accounted.

Of floaten
milke cheefe.

If you will make floaten milke cheefe, which is the choicest of all cheefe, you shall take some of the milke, and heat it upon the fire to warm all the rest; but if it be soure, that you dare not adventure the warming of it for fear of breaking, then you shall heat water and with it warm it; then put in your earning as before shewed, and gather it, press it, salt it, and dry it, as you did all other Cheeses.

Of Eddish
cheefe.

Touthing your Eddish Cheefe, or Winter Cheefe, there is not any difference betwixt it and your summer Cheefe, touch-

ing the making thereof onely, because the season of the year denieth a kindly drying or hardning thereof, it differeth much in taste, and will be soft alwaies; and of these eddish Cheeses you may make as many kinds as of Summer Cheeses, as of one meale, two meales, or of milk that is thuten.

When you have made your Cheese, you shall then have care of the Whey, whose generall use differeth not from that of Butter-milk, for either you shall preserve it to bestow on the poor, because it is a good drink for the labouring man, or keep it to make curds out of it, or lastly, to nourish and bring up your Swine.

If you will make curds of your best Whey, you shall set it upon the fire, and being ready to boyl, you shall put into it a pretty quantity of Butter milk, and then as you see the Curds arising up to the Top of the Whey, with a skimmer skim them off, and put them into a Cullender, and then put in more Butter-milk, and thus doe whilst you can see any Curds arise; then the Whey being drained clean from them, put them into a clean vessel, and so serve them forth as occasion shall serve.

CHAP. VII.

The Office of the Malt, and the severall secrets, and knowledges belonging to the making of Malt.

It is most requisite and fit, that our *House-wife* be experienced and well practised in the well making of Malt, both for the necessary and continuall use thereof, as also for the generall profit which accreth and ariseth to the *Husband, House-wife*, and the whole Family; for as from it is made the drink by which the Household is nourished and sustained, unto the fruitfull Husband-man, (who is the Master of rich ground, and much Tillage) it is an excellent Merchandise, and a commodity of so great Trade, that not onely speciall Towns and Countries are maintained thereby, but also the whole Kingdome, and divers others of our neighbouring Nations.

tions. This office or place of knowledge belongeth particularly to the House-wife ; and though we have many excellent Men-masters , yet it is properly the work and cure of the woman, for it is a house-work , and done altogether within doores , where generally lyeth her charge ; the man only ought to bring in, and to provide the grain , and excuse from her portage or too heavy burthens , but for the Art of making the Malt , and the severall labours appertaining to the same, even from the Fat to the Kiln , it is onely the work of the House-wife , and the Maid-servants to her appertaining.

To begin then with the first knowledge of our Master , it consisteth in the election and choise of grain , fit to make Malt on, of which there are indeed truly but two kinds , that is to say, Barley , which is of all other the most excellent for this purpose ; and Oates , which when Barley is scant or wanting , maketh also a good and sufficient Malt : and though the drink which is drawn from it , be neither so much in the quantity, so strong in the substance , nor yet so pleasant in the taste, yet is the drink very good and tolerable , and nourishing enough for any reasonable creature. Now I do not deny, but there may be made Malt of Wheat, Pease, Lupins. Feches, and such like , yet it is with us of no retained custom, no is the drink simply drawn or extracted from those grains , either wholesome or pleasant , but strong and fullsome : therefore I think it not fit to spend any time in treating of the same. To speak then of the election of Barly , you shall understand that there be divers kinds thereof , according to the alteration of soyles , some being big, some little, some empty, some full, some white, some brown, and some yellow : but I will reduce all these into three kinds, that is, into the Clay Barley, the Sandy-Barly , and the Barly which groweth on the mixt soyl. Now the best Barly to make Malt on , both for yeelding the greatest quantity of matter , and making the strongest, best, and most wholesome drink , is the Clay Barley well dressed, being clean Corne of it selfe, without Weed or Oates , white of colour, full in substance, and sweet in taste : that which groweth on the mixt grounds is the next , for though it be subject to

some Oares and some Weeds : yet being painfully and carefully drest, it is a fair and boll'd Corn, great and full ; and though somewhat b. owner than the former , yet it is of a fair and clean complexion. The last and worst grain for this purpose is the Sand Barly , for although it be seldome or never mixt with Oares , yet if the Tillage be not painfully and cunningly handled, it is much subject to weeds of divers kinds, as Tares, Fetches, and such like , which drink up the Liquor in the brewing, and make the yeeld or quantity thereof very little and unprofitable : besides the grain naturally of it self hath a yellow, withered, empty husk, thick and unfurnished of meal, so that the drink drawn from it , can neither be so much, so strong, so good, nor so pleasant ; so that to conclude , the clean Clay Barley is best for profit in the sale drink , for strength and long lasting.

The Barley in the mixt grounds will serve well for Households and Families : and the sandy barley for the poor , and in such places where better is not to be gotten. And these are to be known of every *Husband* or *House-wife* : the first by his whiteness, greatness, and fulness : the second by his brownness ; and the third by his yellowness , with a dark brown nether end, and the emptiness, and thicknes of the husk : and (in this election of barley) you shall note, that if you find in it any wild Oats, it is a signe of rich clay ground, but ill Husbanded ; yet the malt made thereof is not much amiss , for both the wild Oat and the perfect Oat give a pleasant sharp relish to the drink , if the quantity be not too much, which is evermore to be respected. And to conclude this matter of election, great care must be had of both *Husband* and *House-wife*, that the barley chosen for malt, be exceeding sweet, both in smell and taste, and very clean drest : for any corruption maketh the malt loathsome , and the foul dressing affordeth much losse.

After the skilfull election of grain for malt, the *House-wife* is to look to the situation, goodnesse and apt accommodation of the Malt-house : for in that consisteth both much of the skill , and much of the profit : for the generall situation of the house , it would (as near as can be) stand upon firm dry ground, having prospect every way, with open Windows and Lights to let in the

Wind, Sun and Ayr, which way the Master pleaseth, both to cool and comfort the grain at pleasure, and also close-shute, or draw-windowes to keep out the Frosts and Storms, which are the only lets and hinderances for making the malt good and perfect: for the model or form of the houses, some are made round, with a Court in the middle, some long, and some square, but the round is the best, and the least laborious; for the Cesterns or Fats being placed (as it were) at the head or beginning of the Circle, and the Pump or Well, (but the Pump is best) being close adjoyning, or at least by conveyance of troughs made as usefull as if it were neer adjoyning, the Corn being steept, may with one persons labour and a shovell, be cast from the Fat or Cestern to the floor, and there coucht; then when the couch is broken, it may in the turning either with the hand or the shovell be carried in such a circular house round about from one floor to another, till it come to the Kiln, which would also be placed next over against the Pump and Cesterns, and all contained under one roof.

And thus you may empty steeping after steeping, and carry them with one persons labour from floor to floor, till all the floors be filled: in which circular motion you shall find, that ever that which was first steept, shall first come to the Kiln, and so consequently one after another, in such sort as they were steept, and your work may evermore be constant, and your floors at no time empty, but at your owne pleasure, and all the labour done onely with the hand and shovell, without carrying or re-carrying, or lifting heavy burthens, which is both troublesome and offensive, and not without much losse, because in such cases ever some grain scattereth.

Now over against the Kilne-hole or Furnace, (which is evermore intended to be on the ground) should a convenient place be made to pile the fell for the Kiln, whether it be Straw, Bracken, Furses, Wood, Coal, or other fell: but sweet Straw is of all other the best and neatest. Now it is intended that this *Malt-house* may be made two stories in height, but no higher: over your Cesterns shall be made the Garners wherein to keep your Barley before it be steept: in the bottoms of these Garners, standing directly over the Cesterns, shall be

be convenient holes made to open and shut at pleasure, through which shall run down the barley into the Cestern.

Over the bed of the Kiln can be nothing but the place for the hair cloth, and a spacious roof open every way that the smoke may have a free passage and with the least air be carried from the kiln, which maketh the malt sweet and pleasant. Over that place where the fuel is piled, and is next of all to the bed of the kiln, would likewise be other spacious Garners made, some to receive the Malt as soon as it is dryed with the Comb and Kilne dust, in which it may lye so mellow and ripen, and others to receive the malt after it is skreened and dress'd up; for to let it be too long in the Comb, as above three months at longest, will make it both corrupt, and breed Weevils and other worms, which are the greatest destroyers of malt that may be. And these Garners should be so conveniently plac'd before the front of the Kiln bed, that either with the shovel or a small scuttle you may cast, or carry the malt once dryed into the Garners.

For the other part of the floores, they may be employed as the ground floores are, for the receiving of the malt when it comes from the Cestern; and in this manner, and with these accommodations you may fashion any Malt-house, either round, long square, or of what proportion soever, as either your estate, or the convenience of the ground you have to build on shall administer.

Next to the site or proportion of the ground, you shall have Of Malt-
 a principal care for the making of your malt floores, in which floors.
the custom and the nature of the soil binds many times a man to sundry inconveniences, and that a man must necessarily build according to the matter he hath to build withall, from whence ariseth the many diversities of Malt floores, yet you shall understand, that the generall best Malt floor both for Summer and Winter and all seasons, is the Cave or vaulted Arch which is hewed out of a dry and main getty Rock, for it is both warm in Winter, and cool in Summer, and generally comfortable in all seasons of the year whatsoever. For it is to be noted, that all *Houswives* doe give over the making of malt in the extreame heat of Summer, it is not because the Malt is worse that is made in summer than that which is made in Winter, but because the floores are more unseasonable, and that the Sun getting a power into such open

places, maketh the grain which is steeped to sprout and come so swiftly, that it cannot indure to take time on the floor, and get the right seasoning which belongeth to the same: whereas these kind of vaults being dry, and as it were coucht under the ground, not onely keepeth out the Sun in Summer, which maketh the Malt come much too fast, but also defendeth it from frost, and cold bitter blasts in thup Winter, which will not suffer it to come, or sprout at all; or if part do come and sprout, as that which lyeth in the heart of the ball; yet the upper parts and outside by means of extreame cold cannot sprout, but being again dried hath its first hardness, and is one and the same with raw barley; for every *Housewife* must know, that if Malt do not come as it were altogether, and at an instant, and not one come more than another, the Malt must needs be very much imperfect.

The next floor to the Cave, or dry Sandy Rock, is the floor which is made of earth, or a stiff strong binding clay well watered, and mixt with Horse-dung and Soap-ashes, beaten and wrought together, till it come to one solid firmnesse: this floor is a very warme comfortable Floore in the Winter season, and will help the graine to come and sprout exceedingly, and with the help of windows to let in the cold ayre, and shut out the violent reflection of the Sun, will serve very conveniently for the making of Malt, for nine months in the year, that is to say from *September* till the end of *May*; but for *June*, *July*, and *August*, to employ it to that purpose, will breed both loss and incumbrance. The next floor to this of the earth is that which is made of *plaster*, or *Plaster of Paris*, being burnt in seasonable time, and kept from wet, till the time of sowing, and then smoothly laid, and well levelled: the imperfection of the *plaster floor* is onely the extreame coldnes thereof, which in frosty and cold season so bindeth in the heart of the Grain, that it cannot sprout, for which cause it behooveth every *Maltster* that is compelled to these floors, to look well unto the seasons of the year, and when he findeth either the frosts, Northern blasts, or other nipping storms to rage too violently, then to make his first couches or beds, when the Grain cometh new out of the *Cesters*, much thicker and rounder than otherwise it would do; and as the cold abateth, or the corn increaseth in

sprouting

fercuting, so to make couches or beds thinner and thinner; for the thicker and closer the grain is couched and laid together, the warmer it lyeth, and so catching heat, the sooner it sprouteth, and the thinner it lyeth, the cooler it is, and so much the slower in sprouting. This floor, if the windows be close, and guard off the Sun sufficiently, will (if need shal) serve for the making of Malt ten months in the year; only in *July* and *August* which contain the Dog days it would not be employed, nor in the time of any frost, without great care and circumspection.

Again, there is in this floor another fault, which is a naturall casting out of dust, which much sullieth the grain; and, being dried, makes it look dun and foul, which is much disparagement to the masher; therefore she must have great care that when the malt is taken away, she sweep and keep her floors as clean and neat as may be. The best and worst is the boarded floor, of what kind soever it be, by reason of the too much heat thereof, and yet of boarded floors the Oaken boarded is the coolest and longest lasting; the Elm or Beech is next, then the Ash, and the worst (though it be the fairest to the Eye) is the Firre, for it hath in it self (by reason of the Frankincense and Turpentine which it holdeth) a naturall heat, which mixed with the violence of the Sun in the Summer time, forceth the grain not only to sprout but to grow in the couch, which is much losse, and a fowl imputation. Now these boarded floors can hardly be in use for above five months at the most, that is to say, *October*, *November*, *December*, *January*, and *February*; for the rest, the Sun hath too much strength, and these boarded floors too much warmth; and therefore, in the coolest time it is good to observe to make the couch thin, whereby the ayre may pass through the corn, and so cool it, that it may sprout at leisure.

Now for any other floor besides these already named, there is not any good, to malt upon: for the common floor which is of naturall earth, whether it be Clay, Sand, or Gravel, if it have no mixture at all with it more than its own nature, by oft treading upon it, groweth to gather the nature of saltnesse, or Salt-peter into it, which not only giveth an ill taste to the grain that is laid upon the same, but also his moysture and mouldiness.

diness, which in the moist times of the year arise from the ground, it often corrupteth and putrieth the corn ; the rough paved floor by reason of the unevenness, is unfit to malt on, because the grain getting into the crannies, doth there lye and is not removed or turned up and down as should be with the hand, but many times is so fixed to the ground that it sprouteth and groweth up into a green blade, affording much loss and hindrance to the owner.

The smooth paved floor, or any floore of stone whatsoever is full as ill ; for every one of them naturally against much wet or change of weather, will sweat and distill forth such abundant moisture, that the malt lying upon the same, can neither dry kindly, nor expel the former moisture received in the cistern, but also by that over much moisture many times roteth, and comes to be altogether uselesse. Lastly for the floore made of lime and hair, it is as ill as any formerly spoken of, both in respect of the nature of the Lime, whose heat and sharpness is a main enemy to malt, or any moist corn, as also in respect of the weaknesse and brittlenesse of the substance thereof, being apt to molder and fall in pieces with the lightest treading on the same, and that lime and dust once mixing with the corn, it doth so poyson and suffocate it, that it neither can sprout, nor turn serviceable for any use.

Of the Kiln
and the building
the roof.

Next unto the Malt-floores, our Malster shall have a great care, in the framing and fashioning of the Kiln, of which there are sundry sorts of models, as the ancient forme which was in times past used of our fore fathers being only made in a square proportion at the top, with small splints or rafters, joyned within four inches one of another going from a maine beam crossing the mid part of that great square : then is this great square from the top, with good and sufficient studs to be drawn slope-wise narrower and narrower, till it come to the ground, so that the harth or lowest part thereof may not be above a sixth part to the great square above, on which the malt is laid to be dried ; and this harth shall be made hollow and descending, and not level nor ascending; and these Kilns do not hold any certain quantity in the upper square, but may ever be according to the frame of the house, some being thirty foot each

way

way, some twenty, and some eighteen. There be other Kilnes which are made after this manner open and slope, but they are round of proportion; but both these kinds of Kilns have one fault, which is danger of fire; for lying every way open and apt for the blaze, if the *Malster* be any thing negligent, either in the bouting of the blaze low and forward, or not sweeping every part about the hearth any thing that may take fire, or fore-seeing that no straw which do belong to the bedding of the Kiln do hang down or are loose, whereby the fire may take hold of them, it is very possible that the Kiln may be set on fire; to the great loss and often undoing of the owners.

Which to prevent, and that the *Malster* may have better assurance and comfort in her labour, there is a Kiln now of general use in this Kingdome, which is call'd a *French Kiln*, being framed of a brick, ashler, or other fire stone, according to the nature of the soyl in which Husbands and Housewives live; and this french Kiln is ever safe and secure from fire, and whether the *Malster* wake or sleep, without extream wilfull negligence, there can no danger come to the Kilne; and in these Kilns may be burnt any kind of fuel whatsoever, and neither shall the smoak offend or breed ill taste in the malt, nor yet discolour it, as many times it doth in open Kilnes, where the malt is as it were covered all over, and even parboyl'd in smoke, so that of all sorts of Kilnes whatsoever, this which is called the french Kiln, is to be preferred and only embraced. Of the forme or modell whereof, I will not here stand to treat, because they are now so generally frequent amongst us, that no Mason or Carpenter in the whole Kingdome but can build the same; so that to use more words thereof were tediousnesse to little purpose. Now then is another kind of Kiln, which I have seene (and but in the West Country onely) which for the profitable quaintnesse thereof, I took some special note of, and that was a Kiln made at the end of a Kitchen Raunge or Chimney, being in shape round, and made of brick, with a little hollownesse narrow'd by degrees, into which came from the bottome and midst of the Kitchen chimney a hollow tunnel or vault, like the tunnel of a Chimney, and ran directly on the back side the hood, or back of the Kitchen chimney; then in the midst of the chimney where the

The perfect Kiln.

the greatest strength of the fire was made, was a square hole made of about a foot and half every way, with an iron thick plate to draw to and fro, opening and closing the hole at pleasure ; and this hole doth open only into that tunnel which went to the Kiln, so that the malt being once laid, and spread upon the Kiln ; draw away the Iron plate, and the ordinary fire with which you dress your meat, and perform other necessary businessse, is sucked up into this tunnel, and so conveyeth the heat to the Kiln, where it dryeth the malt with as great perfection as any Kiln I saw in my life, and needeth neither attendance or other ceremony more, than once in five or six houres to turn the malt, and take it away when it is dried sufficiently : for it is here to be noted, that how great or violent soever the fire be, which is in the chimney, yet by reason of the passage, and the quantity thereof, it carrieth no more than a moderate heat to the Kiln ; and for the smoak, it is so carried away in other loop-holes which run from the hollownesse betwix the tunnel, and the Malt-beds, that no malt in the World can possibly be sweeter or more delicately coloured : only the fault of these Kilns are, that they are but little in compass, and so cannot dry much at a time, as not above a quarter or ten strikes at the best in one drying, and therefore are no more but for a mans own particular use, and for the furnishing of one settled Family ; but so applyed, they exceed all the Kilns that I have seen whatsoever.

Bedding of
the Kiln.

When our *Master* hath thus perfected the Malt house and Kiln, then next look to the well bedding of the Kiln, which is diversly done according to mens divers opinions : for some use one thing, and some another, as the necessity of the place, or mens particular profits draw them.

But first to shew you what the bedding of a *Kiln* is, you shall understand that it is a thin covering laid upon the open rafters, which are next unto the heat of the fire, being made either so thin, or so open, that the smallest heat may passe through it, and come to the corn : this bed must be laid so even and level as may be, and not thicker in one place than another, lest the Malt dry too fast where it is thinnest, and too slowly where it is thick, and so in the taste seem to be of two several dryings.

It must also be made of such stuff, as having received heat, it will long continue the same, and be assistant to the fire in drying the corn; it should also have in it no moist or darkish property, lest at the first receiving of the fire it send out a stinking smoke, and so taint the malt; nor should it be of any rough or sharp substance, because upon this bed or bedding is laid the hair cloth, and on the hair cloth the Malt, so that with the turning the Malt and treading upon the cloth, should the bed be of any such roughness, it would soon wear out the hair cloth, which would be both losse and ill *Houswifery*, which is carefully to be eschewed.

But now for the manner or substance whereof this bedding should be made, the best, newest, and sweetest, is clean long Rye straw, with the eares onely cut off, and the ends laid even together, not one longer than another, and so spread upon the raster of the Kilne as even and thicke as may be, and laid as it were shaw by shaw in a just proportion, where skill and industry may make it thin or thick at pleasure, as but the thickness of one straw, or of two, three, four or five, as shall seem to your judgement most convenient; and than this, there can be nothing more even, more dry, sweet, or open to let in the heat at your pleasure; and although in the old open Kilnes it be subject to danger of fire, by reason of the quickness to receive the flame, yet in the french Kilnes (before mentioned) it is a most safe bedding, for not any fire can come neer unto it. There be others which bed the Kilne with Mat; and it is not much to be misliked, if the Mat be made of Rye straw braid, and woven together according to the manner of the *Salomon*, or these usual thin *Bone Mats*, which you shall commonly see in the Summer time standing in *Husbandmens* Chimneys, where one bunt or straw is laid by another, and so woven together with a good strong pack-thread: but these Mat according to the old Proverb (*Most cost, most worships*) they are chargeable to be bought, and very troublesome in the making, and in the wearing will not out-last one of the former look beddings; for if one thread or stitch back, immediately next in that row will follow: onely it is most certain, that during the time it lasteth, it is both

both good, necessary and handsome. But if the *Mat* be made either of Bulrushes, Flags, or any other thick substance (as for the most part they are) then it is not so good a bedding, both because the thicknesse keep th out the heat, and is long before it can be warmed; as also in that it ever being cold, naturally of it self draweth into it a certain moisture, which with the first heat being expelled in smoak, doth much offend and breed ill taste in the *Malt*. There be others that bed the Kiln with a kind of *Mat* made of broad thinne splints of wood wrought Checker-wise one into another, and it hath the same faults which the thick *Mat* hath; for it is long in catching the heat, and will ever smoak at the first warming, and that smoak will the *Malt* smell on ever after; for the smoak of wood is ever more sharp and piercing then any other smoak whatsoever.

Besides, this *Woodden-Mat*, after it hath once bedded the Kiln, it can hardly afterward be taken up or removed; for by continual heat, being brought to such an extreme drynesse, if upon any occasion either to mend the Kiln or cleanse the Kiln, or do other necessary labour underneath the bedding, you shall take up the *woodden mat*, it would presently crack, and fall to pieces, and be no more serviceable.

There be others which bed the Kiln with a bedding made all of *Wickers*, of small wands folded one in another like a hurdle, or such wand work; but it is made very open, every wand at least two or three fingers one from another: and this kind of bedding is a very strong kind of bedding, and will last longeth, and catcheth the heat at the first springing, onely the smoak is offensive, and the roughnesse without great care used, will soon wear out your hair cloth; yet in such places where *straw* is not to be got or spared, and that you are compelled only to use *wood* for your fuel in drying your *Malt*, I allow this bedding before any other, for it is very good, strong, and long lasting: Besides, it may be taken up and set by at pleasure, so that you may sweep and cleanse your Kiln as oft as occasion shall serve, and in the neat and fine keeping of the Kiln, doth consist much of the *House-wives Art*; for to be choakt either with dust, dirt, soot or ashes, as it shewes stinkiness

richness and stoth, the onely great imputations hanging over a *House-wife*, so likewise they hinder the labour, and make the malt dry a great deal worse, and more unkindly.

Next the Bedding of the Kilne, our Malster by all means must have an especiall care with what fewel she dryeth the Malt? for commonly, according to that, it ever receiveth and keepeth the taste, if by some speciall Art in the Kiln, that annoyance be not taken away. To speak then of fewels in general, there are of divers kinds according to the natures of soyles, and the accommodation of places in which men live; yet the best and most principal fewel for the Kilnes, (both for sweetness, gentle heat, and perfect drying) is either good Wheat-straw, Rye-straw, Barley straw, or Oaten-straw; and of these the Wheat straw is the best, because it is most substantial, longest lasting, makes the sharpest fire, and yields the best flame; The next is Rye-straw, then Oaten-straw, and last Barley straw, which by reason it is shortest, lightest, least lasting, and giveth more blaze than heat, it is last of these white straws to be chosen; and where any of these faile or are scarce, you may take the stubble or after crop of them, when the upper part is shorn away; which being well dryed and housed, is as good as any of the rest already spoken of, and lesse chargeable, because it is not fit for any better purpose, as to make fodder, manure, or such like, or more than ordinary thatching, and so fit for this purpose. Next to these white straws, your long Fen Rushes, being very exceedingly well withered and dryed, and all the sappy moysture gotten out of them, and so either safely housed or stacked, are the best fewel; for they make a very substantial fire and much lasting, neither are apt to much blazing, nor the smoak so sharp or violent, but may very well be endured: where all these are wanting, you may take the Straw of Pease, Fitches, Lupins, or Tares, any of which will serve, yet the smoke is apt to taint, and the fire without prevention dryeth too sodainly and swiftly. Next to these is clean Bean straw, or straw mixt of Beanes and Pease together; but this must be handled with great discretion, for the substance containeth so much heat, that it will rather burn than dry, if it be not moderated, and the smoke is also much offensive

Of fewel for the drying of Malt.

offensive. Next to this Bean straw, is your Furs, Gorse, Whine, or small Bruth-wood, which differeth not much from Bean straw; onely the smoake is much sharper, and tainteth the Malt with a much stronger savour. To these I may adde Braken or Brakes, Ling. Heath, or Broom, all which may serve in time of necessity, but each one of them have this fault, that they adde to the Malt an ill taste or savour. After these I place wood of all sorts, for each is a like noylome, and if the smoke which commeth from it touch the Malt, the infection cannot be removed; from whence amongst the best Husbands hath sprung this Opinion, that when at any time drink is ill tasted, they say straight, it was made of Wood dried malt. And thus you see the generality of fuels, their vertues, faults, and how they are to be imployed. Now for Coale of all kindes; Turf, or Peate, they are not by any meanes to be used under Kilne, except where the furnaces are so subtilly ma'd that the smoke is conveyed a quite contrary way, and never commeth neere the malt; in that case it skilleth not what fuel you use, so it be durable and cheap, it is fit for the purpose; onely great regard must be had to the gentleness of the fire, for, as the old Proverb is; (Soft fire makes sweet Malt) so too rash and hasty a fire scorseth and burneth it, which is called among Malsters Fire-fangd; and such Malt is good for little or no purpose: therefore to keep a temperate and true fire, is the only Art of a most skillfull Malster.

When the Kiln is thus made, and furnished of all necessaries duly belonging to the same, you Malsters next care shall be to the fashioning and making of the Garners, Hatches, or Holds, in which both the malt after it is dried, and the Barly before it be steeped, is to be kept and preserved; and these Garners or Safes for Corne are made of diverse fashions, and diverse matters, as some of Boords, some of Bricks, some of Stone, some of Lime and Haire, and some of Mud, Clay, or Loame: but all of these have their severall faults; for wood of all kinds breedeth Weevil and Wormes which destroy the Graine, and is indeed much too hot: for although malt would ever be kept passing dry, yet never so little overplus of heat withers it, and takes away the vertue; for as moisture rots and
corrupts

corrupts it, so heat takes away and decayeth the substance. Brick, because it is laid with Lime, is altogether unwholesome; for the Lime being apt at change of weather to sweat, moistneth the grain, and so tainteth it; and in the driest Seasons with the sharp hot taste, doth fully as much offend it: those which are made of Stone, are much more noysome, both in respect of the reasons before rehearsed, as also in that all Stone of it self will sweat, and so more and more corrupteth the grain which is harboured in it. Lime and haire being of the same nature, carrieth the same offences, and is in the like sort to be eschewed. Now for Mudde, Clay, or Loame, in as much as they must necessarily be mixt with Wood, because otherwise of themselves, they cannot knit or bind together; and besides, that the Clay or Loame must be mixt either with chopt hay, chopt straw, or chopt Litter, they are as great breeders of Wormes and Vermin as wood is, nor are they defences against Mice, but ealie to be wrought through, and so very unprofitable for any Husband or House-wife to use. Besides, they are much too hot, and being either in a close house, neere the Kilne, or the backe, or face of any other Chimney, they dry the Corn too sore, and make it dwindle and wither, so that it neither filleth the bushell, nor enricheth the Liquor, but turnes to losse every way. The best Garner then that can be made both for safety and profit, is to be made either of broken tile-thread, or broken bricks, cunningly and even layd and bound together with Plaster of Paris. or our ordinary English Plaster, or burnt Alabastr, and then covered all over both within and without, in the bottom and on every side, at least three fingers thick with the same Plaster, so as no bricke or tyle-thread may by any means be seen, or come neere to touch the Corne; and these Garners you may make as big, or as little as you please, according to the frame of your house, or place of most convenience for the purpose, which indeed would ever be as neere the Kilne as may be, that the ayre of the fire in the dayes of drying, may come unto the same, or else neere the backs or sides of Chinnies, where the ayre thereof may correct the extreame coldnesse of the plaster, which of all things that are bred in the earth, is the coldest

coldest thing that may be, and yet most dry, and not apt to sweet or take moysture, but by some violent extremity; neither will any worm or vermine come near it, because the great coldnesse thereof is a mortall enemy to their natures; and so the safest and longest, these Garners or plasters, keep all kind of Grain and Pulse in the best perfection.

The making of
cesterns.

After these Garners, Hurches, or large Keeps for Corn are perfitted and made, and fitly adjoynd to the Kiln, the next thing that our Maltster hath to look unto, is the framing of the Fats or Cesterns wherein the Corn is to be steeped: and they are of two sorts, that is, either of Coopers work, being great Fats of wood, of else of Masons work, being Cesterns made of stone; but the Cestern of stone is much the better: for besides, that these great Fats of Wood are very chargeable and costly (as a Fat to containe four quarters of Graine, which is but two and thirty bushels, cannot be afforded under twenty shillings) so likewise they are very casuall and apt to mischance and spilling; for, and besides their ordinary wearing, if in the heat of Summer, they be never so little neglected without water, and suffered to be over-dry, it is tenne to one but in the Winter they will be ready to fall in pieces; and if they be kept moyst, yet if the water be not oft shifted and preserved sweet, the Fatte will soon taint, and being once grown faulty, it is not only irrecoverable, but also whatsoever commeth to be steeped in it after, will be sure to have the same savour; besides the wearing and breaking of Garthes, and Plugs, the binding, cleansing, sweetning, and a whole World of other troubles and charges doth so daily attend them, that the benefit is a great deal short of the incumbrance; whereas the stone Cestern is ever ready and usefull, without any vexation at all; and being once well and sufficiently made, will not need trouble or reparation, (more than ordinary washing) scarce in a hundred years.

Now the best way of making these Malt Cesterns, is to make the bottome and sides of good tyle-threads fixed together with the best Lime and Sand, and the bottom shall be raised at least a foot and a half higher than the ground, and at one corner in the bottom, a fine artificiall round hole must be

be made, which being outwardly stopp'd, the Malster may through it drain the Cistern dry when she pleaseth, and the bottom must be so artificially level'd and contriv'd, that the water may have a true descent to that hole, and not any remain behind when it is open'd.

Now when the model is thus made of tile-hard, which you may doe great or little at your pleasure: then with Lime, Hair, and Beasts-blood mixed together, you shall cover the bottom at least two inches thick, laying it level and plain, as is before shew'd: which done, you shall also cover all the sides and toppe, both within and without, with the same matter, at least a good fingers thicknesse, and the main wall of the whole Cistern shall be a full foot in thicknesse, as well for strength and durablenesse, as other private reasons for the holding the grain and water, whose poysse and weight might otherwise endanger a weaker substance. And thus much concerning the Malt-house, and those severall accommodations which do belong unto the same.

I will now speak a little in generall as touching the Art, The manner
skill, and knowledge of Malt making, which I have referred how to make
to the conclusion of this Chapter, because whosoever is ignorant in any of the things before spoken of, cannot by any
meanes ever attain to the perfection of the most true, and most
chastity Malt-making. To begin then with the Art of making, or (as some terme it) mashing of Malt, you shall first
(having proportioned the quantity you meane to steep, which
should ever be answerable to the content of your Cisterns,
and your Cisterns to your floors) let it either runne downe
from your upper Garner into the Cistern, or other-
wise be carried into your Cisterns, as you shall please, or
your occasions desire; and this Barley would by all meanes be
very clean and neatly drest; then when your Cistern is filled,
you shall from your Pump or Well convey the water into
the Cistern till all the Corn be drencht, and that the water
flow above it; If there be any Corn that will not sink, you
shall with your hand stir it about, and wet it, and so let it rest
and cover the Cistern; and thus for the space of three nights,
you shall let the Corn steep in the water. After the three
Nights

nights expired , the next morning you shall come to the Cestern and pluck out the plug or bung-stick which stoppeth the hole in the bottom of the Cestern , and so drain the water clean from the Corn , and this water you shall by all means save , for much light Corn and others will come forth with this drain water , which is very good Swines meat, and may not be lost by any good House-wife. Then having drained it, you shall let the Cestern drop all that day , and in the evening with your shovel you shall empty the Corn from the Cestern unto the Malt-floore , and when all is out, and the Cestern cleansed , you shall lay all the wet Corn on a great heap, round or long , and flat on the Top ; and the thickness of this heap shall be answerable to the season of the year ; for if the weather be extream cold, then the heap shall be made very thick, as three or four foot, or more , according to the quantity of the grain : but if the weather be temperate and warm, then shall the heap be made thinner, as two foot, a foot and a half, or one foot, according to the quantity of the Grain. And this heap is called of Malsters a Couch or bed of raw Malt.

In this Couch , you shall let the Corn lye three nights more without stirring , and after the expiration of the three nights, you shall look upon it , and if you find that it beginneth but to sprout . (which is called coming of Malt) though it be never so little , as but the very white end of the sprout peeping out , (so it be in the outward part of the heap or couch) you shall then break open the couch , and in the midst where the Corn lay neerest , you shall find the sprout or Corn of a greater largenesse : then with your shovel you shall turn all the outward part of the couch inward , and the inward outward , and make it at the least three or four times as big as it was at the first, and so let it be all that day and night , and the next day you shall with your shovel turn the whole heap over again , increasing the largenesse, and making it of one indifferent thickness over all the floore , that is to say, not above a handfull thick at the most , not failing after for the space of fourteen dayes , which doth make up full in all three weeks, to turn it all over twice or thrice a day , according to the season of the weather , for if it be warm, the Malt must be
turned

turned oftner ; if cool , then it may lye loofer, thicker, and longer together , and when the three weeks is fully accomplished , then you shall (having bedded your Kiln, and spread a clean hair cloth thereon) lay the malt as thine as may be, (as about three fingers thicknesse) upon the hair cloath , and so dry it with a gentle and soft fire , ever and anon turning the Malt (as it dryeth on the Kiln) over and over with your hand, till you find it sufficiently well dried , which you shall know both by the taste , when you bite it in your mouth, and also by the falling off of the Come or sprout , when it is thoroughly dried. Now as soon as you see the Come begin to shed , you shall in the turning of the Malt, rubbe it well between your hand , and scowre it to make the Come fall away, then finding it all sufficiently dried , first put out your fire , then let the Malt cool upon the Kiln for four or five hours, and after raising up the four corners of the haire cloath , and gathering the Malt together on a heap , empty it with the Come and all into your Garners , and there let it lye (if you have not present occasion to use it) for a month or two or three to ripen, but no longer , for as the Come or dust of the Kiln, for such a space melloweth and ripeneth the Malt , making it better both for sale or expence , so to lye too long in it doth ingender Weevil, Wormes, and Vermin , which doe destroy the grain.

Now for the dressing and cleansing of Malt at such time as it is either to be spent in the house , or sold in the Market ; you shall first winnow it with a good wind , either from the Aire, or from the Fan ; and before the winnowing , you shall rub it exceeding well between your hands , to get the Come or *spring* clean away : for the beauty and goodnesse of malt is when it is most snug, cleane, bright , and likeliest to Barley in the view , for then there is least waste, and greatest profit : for Come and dust drinketh up the Liquor , and gives an ill taste to the drink. After it is well rubb'd and winnowed , you shall then see it over in a fine Sive , and if any of the malt be uncleansed, then rub it againe into the Sive till it be pure , and the rubbings will arise on the Top of the Sive , which you may cast off at pleasure , and both those rubbings from the Sive,

and the chaff, and dust which cometh from the winnowings should be fast kept; for they are very good Swines meate, and feed well, mixt either with Whey or swellings: and thus after the malt is ree'd, you shall either sack it up for especial use, or put it into a well cleansed Garner, where it may lye till there be occasion for expence.

Now there be certain Observations in the making of Malt, which I may by no means omit: for though divers opinions do diversly argue them, yet as neer as I can, I will reconcile them to that truth, which is most consonant to reason, and the rule of honesty and equality.

First, there is a difference in mens opinions, as touching the constant time for the mellowing and making of the Malt, that is, from the first steeping untill the time of drying: for some will allow both Fat and Floore hardly a fortnight, some a fortnight, and two or three dayes, and do give this reason.

First, they say, it makes the Corn look whiter and brighter, and doth not get so much the sulling and foulness of the floore, as that which lyeth three weeks, which makes it a great deal more beautifull, and so more saleable: Next, it doth not come, or shoot out so much sprout, as that which lyeth a longer time, and so preserveth more heart in the grain, makes it bol'd and fuller, and so consequently more full of substance, and able to make more of a little, than the other of much more.

These reasons are good in shew, but not in substantial truth: for (although I confesse that corne which lieth least time on the floor, must be the whitest and brightest) yet that which wanteth any of the due time, can neither ripen, mellow, nor come to true perfection, and lesse than three weeks cannot ripen Barley: for look what time it hath to swell and sprout, it must have full that time to flourish, and as much time to decay, now in lesse than a week it cannot doe the first, and so in a week the second, and in another week the third; so that in lesse than three weeks a man cannot make perfect Malt. Again. I confesse, that malt which hath the least Come, must have the greatest Kernel, and so be most substantial; yet the Malt which

which cutteth not out his full sprout, but hath that moyſture (with too much haſte) driven in which ſhould be expelled, can never be Malt of any long laſting, or profitable for induſtry, becauſe it hath ſo much moiſt ſubſtance as doth make it both apt to corrupt and breed worms in in it great abundance. It is moſt true, that this haſty made Malt is faireſt to the eye, and will ſoonest be vented in the market ; and being ſpent as ſoon as it is bought, little or no loſſe is to be perceived ; yet if it be kept three or four months or longer (unleſſe the place where it is kept, be like a hot-houſe) it will be ſo ſtink and give again, that it will be little better than raw Malt, and ſo good for no ſervice without a ſecond drying.

Besides, Malt that is not ſuffered to ſprout to the full kind, but is ſtopt as ſoon as it begins to peepe, much of that Malt cannot come at all, for the moiſteſt grains do ſprout firſt, and the hardeſt are longer in breaking the huſk ; now, if you ſtop the grain on the firſt ſprout, and not give all leiſure to come on after another, you ſhall have half Malt and half Barley, and that is good for nothing but Hens and Hogg's trough. So that to conclude, leſſe than three weekes you cannot have to make good and perfect Malt.

Next, there is a difference in the turning of the Malt, for ſome (and thoſe be the moſt Men-maltſters whatſoever) turne all their Malt with the ſhovel, and ſay it is more eaſie, more ſpeedy, and diſpatcheth more in an hour, then any other way doth in three ; and it is very true, yet it ſcattereth much behind unturn'd and commonly that which was undermoſt it leaveth undermoſt ſtill, and ſo by ſome comming too much and others not comming at all, the Malt is oft much imperfect, and the old ſaying made good, *but too much haſte maketh waſte*. Now, there are others, and they are for the moſt part Women maltſters) which turn all with the hand, and that is the beſt, ſafeſt, and moſt certain way ; for there is not a grain which the hand doth not remove, and turn over and over, and layes very ſeveral heap or row of ſuch an even and juſt thickneſſe, that the Malt both equally commeth, and equally ſeaſoneth together without defect or alteration ; and though he that

hath much Malt to make, will be willing to hearken to the swiftest course in making, yet he that will make the best Malt, must take such convenient leisure, and imploy that labour which cometh neereſt to perfection.

Then there is another eſpecial care to be had in the coming or ſprouting of malt, which is, that as it muſt not come too little, ſo it muſt not by any meanes come too much, for that is the groſſeſt abuſe that may be ; and that which we call comed or ſprouted too much, is, when either by negligence, for want of looking to the couch and not opening of it, or for want of turning when the Malt is ſpread on the floor, it comes or ſprouts at both ends, which Huſbands call *Aker ſpiend* : ſuch corn, by reaſon the whole heart or ſubſtance is driven out of it, can be good for no purpoſe but the Swine trough, and therefore you muſt have an eſpecial care both to the welltending of the couch, and the turning the Malt on the floore, and be ſure (as near as you can) by the ordering of the Couch, and heaping the hardeſt grain inward and warmeſt, to make it all come very indifferently together. Now, if it ſo fall out, that you buy your Barly, and happen to light on mixt grain, ſome being old Corn, ſome new Corn, ſome of the heart of the ſtack, and ſome of the ſtaddle, which is an ordinary deceit with Huſbandmen in the Market, then you may be well aſſured, that this grain can never come nor ſprout equally together, for the new corn will ſprout before the old, and the ſtaddle before that in the heart of the ſtack, by reaſon the one exceedeth the other in moiſtneſſe : therefore in this caſe you ſhall mark well which cometh firſt, which will be ſtill in the heart of the Couch, and with your hand gather it by it ſelf into a ſeparate place, and then heap the other together again : and thus as it cometh and ſprouteth, ſo gather it from the heap with your hand, and ſpread it on the floor, and keep the other ſtill in a thick heap till all be ſprouted. Now laſtly obſerve, that if your Malt be hard to ſprout or come, and that the fault conſiſt more in the bitter coldneſſe of the ſeaſon, than any defect of the Corn, that then (beſides the thick or cloſe making of the heap or couch) you ſaile not to cover it over with ſome thick woollen clothes, as coarſe Coverlids,

verlids, or such like stuff, the warmth whereof will make it come presently ; which once perceived, then forthwith uncloth it, and order it as aforesaid in all poynts. And thus much for the Art, Order, Skill, and Cunning, belonging to Malt making.

Now as touching the making of Oates into Milt, which is a thing of generall use, in many parts of this Kingdome where Barley is scarce, as in *Cheeshire, Lancashire, Derbyshire, Cornwall*, and the like, the Art and Skill is all one with that of Barley, nor is there any variation or change of work, but one and the same order still to be observed ; onely by reason that Oats are more swift in sprouting, and apt to clutter, ball, and hang together by the length of the sprout than Barley is, therefore you must not fail but turn them oftner than Barley, and in the turning be carefull to turn all and not leave any unmoved. Lastly, they will need less of the floor than Barley will ; for in a full fortnight, or a fortnight and two or three dayes you may make very good and perfect Oat malt. But because I have a great deal more to speak particularly of Oats in the next Chapter, I will here conclude this, and advise every skilfull Housewife to joyn with mine observations, her own tryed experience, and no doubt but she shall find both profit and satisfaction.

Of Oat-malt.

CHAP. VI.

Of the excellency of Oats, and the many singular vertues and use of them in a Family.

Oates although they are of all manner of graine the cheapest because of their generality, being a grain of that goodnesse and hardnesse, that it will grow in any soyl whatsoever, be it never so rich, or never so poor, as if nature had made it the onely loving companion and true friend to mankind ; yet it is a graine of that singularity for the multiplicity of vertues, and necessary use for the sustenance and support of the family, that nor any other grain is to be compared with it ; for if any other have equal vertue, yet it hath not equal value, and if not equal value,

then it wants many degrees of equall vertue ; so that joyning vertue and value together, no *Horse, Mule, Camel, or any other Creature* per whatsoever, hath so true and worthy a friend, as his Oats are.

The vertue of
Oats to Cat-
till.

To speak then first of the vertues of Oats as they accrue to Cattel and Creatures without doors, and first to begin with the Horse, there is not any food whatsoever that is so good, wholesome and agreeable with the nature of a Horse as Oats are, being a provender in which he taketh such delight, that with little feedeth, travellth, and doth any violent labour whatsoever, with more courage and comfort, then with any other food that can be invented, as all men know that have either use of it, or Horses : neither doth the Horse ever take surfeit of Oats (if they be sweet and dry) for all be, he may well be glutted, or stalled up on them with indiscreet feeding, and so refuse them for a little time, yet he never surfeiteth, or any present sickness will follow after : whereas no other grain but gluts a Horse therewith, and instantly sickness will follow, which shewes surfeit ; and the danger is oft incurable, for we read in *Isa.*, at the siege of *Nap.* of many hundred Horses that died on the surfeit of wheat : *Rom.* also dyed many hundred Horses of the plague, which by due proof was found to proceed from a surfeit taken of pease, and hitches ; and so I could run over all other grains, but it is needless, and far from the purpose I have to handle : suffice it, Oats for Horses are the best of all foods whatsoever, whether they be but only clean threshed from the sheaf, and well winnowed, or converted to Oat-meal, and so ground and made into bread, Oat-broyld, and given a Horse whilst there are cold, and sweet are an excellent food for any Horse in the time of disease, poverty or sickness; for they scower and fat exceedingly.

In the same nature that Oats are for Horses, so are they for the Ass, Mule, Camel or any other beast of burden.

If you will see *Isaiah* Oxe, Bull, Cow, or any Neat whatsoever to an extraordinary height of fatnesse, there is no food that it so soon as Oats do, whether you give them in the straw, or clean threshed from the sheaf, and well winnowed : but the winnowed Oate is the best ; for by them I have seen an Oxe, fed to twenty pounds, twenty four pounds, and thirty pounds, which is a most unreasonable reckoning for any beast ; only *Isaiah*, and the tallow hath been precious.

Sheepe

Sheep or Goats may likewise be fed with Oates, to as great price and profit as with Pease, and Swine are fed with Oates either in raw Milt or otherwise, to as great thicknesse as with any graine whatsoever; only they must have a few Pease after the Oats to harden the fat, or else it will waste, and consume in boyling. Now for holding Swine, which are onely to be preserved in good flesh, nothing is better then a thinne mange made of ground Oats, Whey, Butter-milk, or other ordinary wash or swillage, which either the Dairy or Kitchen affordeth; nor is there any more sovereign or excellent meat for Swine in the time of sicknesse, then a mange made of ground Oates and sweet Whey, warmed luke-warm on the fire, and mixt with the powder of Ruddle, or red Oaker. Nay if you will go to the matter of pleasure, there is not any meat so excellent for the feeding, and wholsome keeping of a kennel of Hounds, as the Mange made of ground Oats and scalding water, or of beef broath, or any other broth, in which flesh hath been sodden; if it be for the feeding, strengthening and comforting of Grey-hounds, Spaniels, or any other sort of tenderer Doggs, there is no meat better than sheeps heads, hair and all, or other intralls of Sheep chopt and well sodden with good store of oat-meal.

Now for all manner of Poultry, as Cocks, Capons, Hens, Chickens of great size, Turkeys, Geese, Ducks, Swannes, and such like, there is no food feedeth them better than Oats, and if it be the young breed of any of those kinds, even from the first hatching or disclosing, till they be able to shift for themselves; there is no food better whatsoever then Oat-meal Groats, or fine Oat-meal, either simple of it self, or else mixt with Milk, drink, or else new made Urine.

Thus much touching the vertues and quality of Oates or Oat-meal, as they are serviceable for the use of Cattell and Poultry. Vertue of
Oats for man.
Now for the most necessary use thereof for man, and the generall support of the family, there is no grain in our knowledge answerable unto it.

First for the simple Oat it self (excepting some particular physick helps, as frying them with sweet butter, & putting them in a bag, & very hot applied to the belly, or stomach, to avoid collick or windines & such experiments) the most special use which is made of them

is

Making of
Oat-meal.

is for Malt to make Beer or Ale of, which is auther exceeding well : and maintaineth many Towns and Countries ; but the Oat-meal which is drawn from them, being the heart and kernel of the Oat is a thing of much rarer price and estimation ; for to speak truth, it is like Salt of such a general use, that without it hardly can any Family be maintained : therefore I think it not much amiss to speak a word or two, touching the making of Oat-meal. You shall understand then, that to make good and perfect Oat-meal, you shall first dry your Oats exceeding well ; & then put them on the Mill, which may either be water-mill, wind-mill, or horse mill (but the Horse-mill is best) & no more but crush or hull them ; that is, to carry the Hones so large that they may no more but crush the husk from the Kernel : then you shall winnow the hulls from the Kernels either with the wind, or a Fan, and finding them of an indifferent cleanness. (for it is impossible to hull them all clean at the first) you shall then put them on again, and making the mill go a little closer, run them through the Mill again, and then winnow them over again, and such Greets or Kernels as are clean hull'd, and well cut, you may lay by, and the rest you shall run through the mill again the third time, and so winnow them again, in which time all will be perfect, and the Greets or full Kernels will separate from the smaller Oat meal ; for you shall understand, that at this first making of Oat meal, you shall ever have two sorts of Oat-meales, that is, the full whole Greet or Kernel, and the small dust Oat-meal : As for the coorse Hulls or Chaff that commeth from them, that also is worthy saving ; for it is an excellent good Horse provender for any plow or labouring Horses, being mixt with either beans, pease, or any other pulse whatsoever.

The vertues
of Oatmeal.

Now for the use and vertues of these severall kinds of Oat meals in maintaining the family, they are so many (according to the many customs of many Nations) that it is almost impossible to reckon all ; yet (as near as I can) I will impart my knowledge, and what I have taie from relation.

First, for the small dust, or meal Oat-meal, it is that with which all porrage is made and thicken'd, whether they be meat porrage, Milk porrage, or any thick, or else thinne Grewel whatsoever, of whose goodnesse and wholesome use it is needlesse to speak, in that it is frequent with every experience : Also, with this small meal

meal Oat-meal, is made in divers Countries six severall kinds of
very good and wholsome bread, every one finer than another, as your
Anacks, Jamacks, and such like. Also there is made of it, both
thick and thin Oaten cakes, which are very pleasant in taste,
and much esteemed : but if it be mixed with fine wheat-meal,
then it maketh a most delicate and dainty Oat cake, either
thick or thinne, such as no Prince in the world but may have
them served to his Table : also this small Oat-meal mixed
with blood, and the Liver of either Sheep, Calfe, or Swine,
maketh that pudding which is called the Haggas or Haggis,
of whose goodnesse it is in vain to boast, because there is hard-
ly to be found a man that doth not affect them. And
lastly, from this small Oat-meal by oft steeping it in water
and cleansing it, and then boyling it to a thick and stiffe
jelly, is made that excellent dish of meat which is so esteemed
or in the west parts of this Kingdome, which they call Wash-
brew, and in *Cheshire*, and *Lancashire* they call it Flamery,
or Flumery, the wholsomnesse and rare goodnesse, nay, the
very Physick helps thereof, being such and so many, that I my
self have heard a very reverend and worthily renowned
Physician speak more in the commendations of that meat,
than of any other food whatsoever : and certain it is, that you
shall not heare of any that ever did surfeit of this Wash-brew
or Flamery ; and yet I have seene them of very dainty and
sickly stomachs which have eaten great quantities there-
of beyond the proportion of ordinary meates. Now
for the manner of eating this meat, it is of divers diversly
used ; for some eat it with Honey, which is reputed the best
sauc ; some with Wine, either Sack, Claret or White ; some
with strong Beer, or strong Ale, and some with Milk, as your
ability, or the accommodations of the place will administer.

Now there is derived from this Wash-brew another coarser
meat which is as it were the dregges, or grosser substance of
the Wash-brew, which is called Gird brew, which is a well
filling and sufficient meat, fit for servants and men of labour ;
of the commendation whereof, I will not much stand, in that
it is a meat of harder digestion, and fit indeed but for strong
able stomachs, and such whose toyl and much sweat both
liberally

liberally, spendeth, and hath ours, and also preserveth men from the effluence of humors and afflictions.

Now for the bigg kind of Oat-meal, which is called Greets, or Corn Oat-meal, it is of no lesse use than the former, nor are there fewer meats compounded thereof: for first, of these Greets are made all sorts of puddings, or pots (as the West Country calls them) whether they be black, as those which are made of the blood of Beasts, Swine, Sheep, Geese, Red or Fallow Deer, or the like, mixt with whole Greets, Suet, and wholesome herbs: or else white, as when the Greets are mixt with good Cream, Egges, Bread-crumbs, Suet, Currants, and other wholesome Spices. Also of these Greets is made the good Friday pudding, which is mixt with Egges, Milk, Suet Penny-royal; and boyl'd first in a linnen bag, and then stript and buttered with sweet butter. Again, if you roast a Goose, and stop her belly with whole Greets beaten together with Egges, and after mixt with the Gravy, there cannot be a more better or pleasanter sawce: Nay, if a man be at Sea in any long Travel, he cannot eat a more wholesome and pleasant meat then these whole Greets boyled in water till they burst, and then mixt with butter, and so eaten with spoons, which although Seamen call it simply by the name of Loblolly, yet there is not any meat, how magnificent soever the name be, that is more toothsome or wholesome. And to conclude, there is no way or purpose whatsoever to which a man can use or employ Rice, but with the same seasoning and order you may employ the whole greets of Oat-meal, and have full as good and wholesome meat, and as well tasted: so that I may well knit up this Chapter with this application of Oat-meal, that the little charge and great benefit considered, it is the very Crown of the Housewives Garland, and doth more grace her Table and her Knowledge, then all graines whatsoever; neither indeed can any Family or Household be well and thriftily maintained, where this is either scant or wanting. And thus much touching the nature, worth, vertues, and great necessity of Oates, and Oat-meal.

CHAP. VIII.

Of the office of the Brew-house, and the Bake-house, and the necessary things belonging to the same.

WHEN our *English House-wife* knowes how to preserve health by wholesome Physick, to nourish by good mate, and to cloath the body with warm garments, she must not then by any meanes be ignorant in the provision of bread and drink. she must know both the proportions and compositions of the same. And for as much as drink is in every house more generally spent than bread, being indeed, (but how well I know not) made the very substance of all entertainment; I will first begin with it, and therefore you shall know that generally our Kingdome hath but two kinds of drinks, *Diversities of Drinks.* that is to say, Beer and Ale, but particularly four, as Beer, Ale, Perry, and Cider; and to these we may adde two more, Meed, and Metheglin, two compound drinks of Honey and Herbs, which in the places where they are made, as in *Wales*, and the *Marches*, are reckoned for exceeding wholesome and cordiall.

To speak then of Beer, although there be divers kinds of tafts *Strong beer,* and strength thereof, according to the allowance of Malt, hoppes, and age given unto the same; yet indeed there can be truly said to be but two kinds thereof, namely, Ordinary beer, and March beer, all other beeres being derived from them.

Touching ordinary beer, which is that, wherewith either *Of ordinary* Noblemen, Gentleman, Yeoman, or Husbandman, shall main-*beer.*tain his Family the whole year, it is meet first that our *Eng-lish House-wife* respect the proportion or allowance of Malt due to the same, which amongst the best *Husbands*, is thought most convenient; and it is held, that to draw from one quarter of good malt three hushheads of beer, is the best ordinary proportion that can be allowed, and having age and good caske to yein, it will be strong enough for any good mans drinking.

Now for the brewing of ordinary beere, your malt being *Of brewing well ordinary beer.*

well ground, and put in your mash-fat, and your Liqueur in your lead ready to boyle, you shall then by little and little with scoopes or pailles put the boyling Liqueur to the malt, and then stir it even to the bottom exceedingly well together, which is called the mashing of the malt, then the Liqueur swimming in the Top, cover all over with more malt; and so let it stand an hour and more in the mash-fat, during which space you may if you please, heat more Liqueur in your lead for your second or small drink, this done, pluck up your mashing stroam, and let the first Liqueur runne gently from the malt, either in a clean trough, or other vessels prepared for the purpose, and then stopping the mash fat againe, put the second Liqueur to the malt, and stir it well together; then your Lead being emptied, put your first Liqueur or wort therein, and then to every quarter of malt, put a pound and a halfe of the best Hops you can get, and boile them an houre together, till taking up a dish full thereof, you see the Hops shrink into the bottom of the dish; this done, put the wort thorow a straight Sieve, which may drain the Hops from it into your cooler, wick standing over the Guile-fat, you shall in the bottom thereof, set a great bowl with your barm, and some of the first wort (before the Hoppes come into it mixt together) that it may rise therein, and then let your wort drop or runne gently into the dish with the barm which stands in the Guile-fat, and this you shall doe the first day of your brewing, letting your cooler drop all the night following, and some part of the next morning, and as it drops if you find that a black skum or murther riseth upon the barm, you shall with your hand take it off, and cast it away; then nothing being left in the cooler, and the Beer well risen, with your hand stir it about, and so let it stand an houre after, and then beating it and the barme exceedingly well together, tun it up into the Hogsheads, being clean wash'd and scalded, and so let it purge; and herein you shall observe not to Tun your vessels too full, for fear thereby it purge too much of the barm away: when it hath purged a day and a night, you shall cloze up the bung-holes with Clay, and onely for a day or two after, keep a vent-hole in it, and after cloze it up as fast as may be. Now for your second or small drink

drink which are left upon the graine, you shall suffer it there to stay but an hour, or a little better, and then drain it all off also; which done, put it into the Lead with the former Hops, and boyl the other also, then clear it up from the Hoppes and cover it very close, till your first Beere be Tunned, and then, as before, put it also to barm, and so tunne it up also in smaller vessels, and of this second beer you shall not draw above one Hoghead to three of the better. Now there be divers other wayes and Observations, for the brewing of ordinary beer; but none so good, so easie, so ready and quickly performed, as this before shew'd; neither will any beer last longer, or ripen sooner, for it may be drunk at a fortnights age, and will last as long and lively.

Now for the brewing of the best March Beere, you shall allow to a Hoghead thereof, a quarter of the best Malt well ground; then you shall take a Peck of Pease, half a peck of Wheat, and half a peck of Oats, and grind them all very well together, and then mixe them with your Malt; which done, you shall in all points brew this beer, as you did the former ordinary Beer; onely you shall allow a pound and a half of Hops to this one Hoghead: and whereas before you drew but two sorts of beer, so now you shall draw three; that is, a Hoghead of the best, and a Hoghead of the second, and half a Hoghead of small beer, without any augmentation of Hops or Malt.

Of brewing
the best march
beer.

This March beer would be brewed in the months of *March* or *April*, and shou'd (if it have right) have a whole year to ripen in: it will last two, three, or four years, if it lie cool; and endure the drawing to the last drop, though with never so much leisure.

Now for the brewing of strong Ale, because it is drink of no such long lasting as beer is, therefore you shall brew lesse quantity at a time thereof, as two bushels of Northern measure (which is four bushels, or half a quarter in the South) at a brewing and not above, which will make fourteen gallons of the best Ale. Now for the mashing and ordering of it in the mash vat, it will not differ any thing from that of beer

beer : as for Hops , although some use not to put in any, yet the best Brewers thereof will allow to fourteene gallon of Ale a good espau full of Hops and no more , yet before you put in your hops , as soon as you take it from the grains, you shall put it into a vessel, and change it , or blink it, in this manner : put into the wort a handfull of Oak-boughes , and a pewter-dish , and let them lye therein till the wort look a little paler than it did at the first , and then presently take out the dish and the leafs , and then boyl it a full houre with the hops, as afore-said, and then cleanse it , and set it in vessels to cool ; when it is milk-warne having set your barm to rise with some sweet wort , then put all into the guile fat, and as soon as it riseth, with a dish or bowl beat it in, and so keep it with continual beating a day and a night at least. and after tun it. From this Ale you may also draw half so much very good middle Ale, and a third part very good small Ale.

Brewing of
bottle Ale.

Touching the brewing of Bottle-Ale , it differeth nothing at all from Brewing of strong Ale , only it must be drawre in a larger proportion , as at least twenty gallons of half a quarter ; and when it comes to be changed , you shall blink it (as was before shewed) more by much than was the strong Ale, for it must be pretty and sharp , which giveth the life and quicknesse to the Ale : and when you tun it , you shall put it into round bottles with narrow mouthes , and then stopping them close with corks, set them in a cold Cellar up to the wale in sand , and be sure that the corks be fast tied in with strong pack-thread, for fear of rising out, or taking vent , which is the utter spoil of the Ale.

Now for the small drink arising from this bottle-Ale , or any other Beer or Ale whatsoever , if you keep it after it is blink'd and boyled in a close vessel . and then put it to barm every morning as you have occasion to use it , the drink will drink a great deal the fresher , and be much more lively in taste.

Of making
Perry or Cider.

As for the making of Perry and Cider , which are drinks much used in the West-parts , and other Countries well stored with fruit in this Kingdome ; you shall know that your

your Perry is made of Pears only, and your Cider of Apples; and for the manner of making thereof, it is done after one fashion, that is to say: After your Pears and Apples are well pick'd from the stalks, rottenesse, and all manner of other filth, you shall put them in the Presse-mill, which is made with a Mil stone running round in a circle, under which you shall crush your Peares or Apples, and then straining them thorow a bag of hair-cloth, tun up the same, (after it hath been a little settled) into Hogheads, Barrels, and other close vessels.

Now after you have press'd all, you shall save that which is within the hair-cloth bag, and putting it into severall vessels, put a pretty quantity of Water thereunto, and after it hath stood a day or two, and hath been well stirred together, presse it also over again, for this will make a small Perry or Cider, and must be spent first. Now of your best Sider, that which you make of your Summer or sweet fruit, you shall call Summer, or sweet Sider, or Perry, and that you shall spend first also; and that which you make of the Winter, and hard fruit, you shall call Winter, and sowre Cider, or Perry, and that you may spend last, for it will endure the longest.

Thus after our *English House-wife* is experienc'd in the brew- Of Baking.
ing of these severall drinks, she shall then look into her Bake-house, and to the making of all sorts of bread, either for masters, servants, or hinds, and to the ordering and compounding of the meal for each severall use.

To speak then first of meales for bread, they are either Ordering of
simple or compound: simple, as Wheat, and Rye, or com- Meal.
pound, as Rye and Wheat mixt together, or Rye, Wheat, and Barley mixt together; and of these the oldest meal is ever the best, and yieldeth most, so it be sweet, and untainted; for the preservation whereof, it is meet that you cleanse your meal well from the bran, and then keep it in sweet vessels.

Now for the baking of bread of your simple meales, your Baking Man-
best and principal bread is Manchet, which you shall bake in chets.
O this

this manner : First, your Meale being ground upon the black stones, if it be possible, which makes the whitest flower, and boulded through the finest boulding cloath, you shall put it into a clean Kimmel, and opening the flower holow in the midst, put into it of the best Ale barm, the quantity of three pints to a bushel of Meale, with some salt to season it with; then put in your Liquor reasonable warm, and knead it very well together with both your hands, and through the brake, or for want thereof, fold it in a cloath, and with your feet tread it a good space together, then lyeing it lye an hour or thereabouts to sweel, take it forth and mould it into Manchetts round and flat, scotch them about the waite to give it leave to rise, and prick it with your knife in the Top, and so put it into the Oven, and bake it with a gentle heat.

To bake the best cheat bread, which is also simply of Wheat onely, you shall after your meal is dust and boulded through a more coarse boulder than was used for your Manchetts, and put also into a clean Tub, Trough, or Kimmel, take a some Leaven, that is, a piece of such like Leaven saved from a former batch, and well fill'd with salt; and so layd up to some, and this soure Leaven you shall break into small pieces into warm water, and then strain it, which done, make a deepe hollow hole, as was before said, in the midst of your flower, and therein poure your strained Liquor, then with your hand mixe some part of the flower therewith, till the Liquor be as thick as a Pancake batter, then cover it all over with malt, and so let it lye all that night, the next morning stirre it, and all the rest of the Meale well together, and with a little more warm water, barm, and salt to season it with, bring it to a perfect Leaven, stiffe and firme; then knead it, break it, and tread it, as was before said in the Manchetts, and forme it up in reasonable bigge Loaves: and then bake it with a different good heat: and thus according to these two examples before shewed, you may bake Leavened or unleavened bread whatsoever, whether it be simple Corn, as Wheat or Rye of it self; or compound Grain, as Wheat and Rye, or Wheat and Barley,

Barley, or Rye and Barley, or any other mixt white Corn; only because Rye is a little stronger Grain than Wheat, it shall be good for you, to put your water a little hotter than you did to your Wheat.

For your brown bread, or bread for your hinde-servants, which is the coarsest bread for mans use, you shall take of Barley two bushels, of Pease two pecks, of Wheat or Rye a peck, a peck of Malt: these you shall grind all together, and druffe through a Meale sieve, then putting it into a sower trough, set it upon the fire, and when it boyles, let one put in the water, and another with a mash rudder stire some of the flower with it after it hath been seasoned with salt, and let it be till the next day, and then putting to the rest of the flower, work it up into stiffe Leaven, then mould it, and bake it into great Loaves with a very strong heat; now if your trough be not sower enough to sower your Leaven, then you shall either let it be longer in the trough, or else take the help of a sower Leaven with your boyling water: for you must understand, that the hotter your Liquor is, the lesse will be the smell or rankness of the Pease be perceived. And thus much for the baking of any kind of bread, which our English Housewife shall have occasion to use for the maintenance of her Family.

As for the generall Observations to be respected in the Bake-house, or Bake-houses they be these. First, that your bake-house be seated in so convenient a part of the house, that the smoke may not annoy your other more private rooms; then that your furnace be made close and hollow for being covered, and with a vent for the passage of smoke, lest it taint your Liquor; then that you prefer a Copper before a Lead, next that your Mash-fat be ever nearest to your Lead, your cooler nearer your Mash-fat, and your Gail-fat under your Cooler, and adjoyning to them all severall cleyn tubs to receive your Wortes and Liquors: then in your Bake-house, you shall have a fair baulking-house, with large pipes to baulk Malt in, fair troughs to lay Leaven in, and sweet sates to receive your bran: you shall have Boulders, Sticks, Ranges, and Mash-sieves of all sorts, both fine and coorse; you shall have

have fair Tables to mould on, large Ovens to bake in, the soaks thereof, rather of one or two intire stones, than of many bricks, and the mouth made narrow, square, and easie to be close covered: as for your peesles, cole-rakes, maukins, and such like, though they be necessary, yet they are of such generall use they need no further Relation. And thus much for a full satisfaction to all the *House-wives* and *House-holds* of this Kingdome, touching Brewing, Baking, and all whatsoever else appertaineth to either of their Offices.

The End of the English House-wife.

FINIS.

THE
INRICHMENT
Of the VVeald of
KENT.
OR

A Direction to the Husbandman, for
the true Ordering, Manuring, and Inriching of
all the Grounds within the VVealds of *Kent*, and
Suffex; and may generally serve for all the Grounds
in England of that Nature: As

1. *Shewing the nature of Wealdish Ground comparing it with the
Soyle of the Shires at large.*

2. *Declaring what the Marle is, and the severall sorts thereof, and
where it is usually found.*

3. *The profitable use of Marle, and other rich manuring, as well in
each sort of Arable Land, as also for the increase of Corn and Pasture
through the Kingdome.*

Painfully gathered for the good of this Island, by a man
of great Eminence and Worth, but revised, enlarged, and
corrected with the consent, and by conference
with the first Author.

By G. M.

LONDON,

Printed by *William Wilson*, for *George Saw-
bridge*, at the Bible on Ludgate-hill,
neer Fleet-bridge. 1660.



TO THE
HONOURABLE
Knight, *Sir GEORGE RIVERS*
of Chafford, in the County of
KENT.

SIR,



As I no Scat' (more than this bare
and plain modest Epistle,) by which
to come to your worthy cares, yet in
respect of the honest livery which it
carries, (being necessary and husbandly
Collections, especially gathered for the
Country and Soil wherein you live) I
know it cannot chuse but find both fa-
vour and mercy in your acceptations; but
when I call into my consideration the

your worthiness of your experience in this and all other the like
things, which tend to the general benefit of the Commonwealth,
and the like Excellency of your Wisdom, Judgment, Bounty,
and Honourable Humility (which giveth both strength and ad-
vantage to provide of this nature) I could not but take unto
me a double encouragement, and so do I venture this work
to be presented unto your goodness, Go and approach with all thy
thoughts before him, he that is perfect knows all which his
light will discover; he that is able both to correct and a-

The Epistle Dedicatory.

mend any thing that is imperfect in thee, hee, for vnder sake,
will never forsake thee. Believe me (worthy Sir) should this Sub-
ject wish it self a Patron, I do not thinke it cou'd wish beyond you;
for you are a volume full of all that of which it increaseth: wi-
ness your years, your supportation of the poor, and your continuall
employment; with any of which there is not (of your ranke) a se-
cond living in your Country, to walke hand in hand with you. Being
then (dear Sir) the oldest and best friend to your Country, forsake
neither, nor this which comes to serve it; and though in this Glass
some lineaments may appear imperfect, yet by the help of your fa-
vour (though little be exact, or most excellent) nothing shall be gross
or unworthy the survey of your worthier patience. And so I rest,

Yours to be commanded

Gervase Markham.



A Discourse of the Weald of Kent; and a comparison of A. shire Lands
there, with the other parts of the Shires. Together with some ne-
cessary counsels for the ordering and enriching of the marleable
Lands in the Weald, as generally in any part of this Kingdome.

THe Weald of Kent is the lower part of that shire, Further Ad-
lying on the South side thereof, and adjoyneth to ditions,
the Weald of *Sussex*, to the west.

The Weald, both in *Kent* & *Sussex*, was some-
times all (or the most part) woody, Wild, and (in
the first times) uninhabited, and from thence took the name of
Weald from the *Saxon* word, *Weale*, or *Yeale*, or *Weald*, which
signifieth a Woody Country, or Forrest like ground. The *Brit-*
ons called it *Anared*, which signifieth Greatnesse or Wonder-
full, and in Latine it was called *Silva Ardida*, (that is to say) the
Chafe or Forrest of *Anare*, by reason of the great circuit, or
large bounds thereof.

Touching the true boundary or limits of this Weald, there
have been divers opinions, and most of them various, and much
differing both in place and quantity, but that which is the nearest
& best allied unto truth both according to the opinions of *Ar-*
istotle, *Mercerius*, *Henry of Huntingdon*, and others of most credible
report, is, that it extendeth from the City of *Winchester* in *Sussex*
an hundred and twenty miles in Length towards the West; and
thirty miles in breadth towards the North. Now although this
report be most agreeing unto verity, yet who knowes not that
curiosity may raise up many objections to withstand it: and
therefore Mr. *Lambert* in his *Pereambulation of Kent*, hath pre-
scribed the best and most infallible way to find out the true and

certain bounds of this Weald, to be only by Jury, or the Verdict of twelve men impannelled for that purpose, either in case of controversie, or other particular search ; and it hath been in these latter times brought forth most plentifully : for it hath been found by diverse late Verdicts, upon speciall and most necessary occasions, than the Weald of *Kent* is truly, Mr. *Lambert* second step in his Perambulation of *Kent*, reaching from *Wincchester* in *Sussex*, and that hill there, unto the top of *Rever* Hill in *Kent*; and neither farther towards *London*, nor shorer towards *Tunbridge*; which agreeth so perfectly with the former limitations, that both may be received as most true and sufficient.

This Weald was for many yeares held to be a Wild Desert, or most unfruitfull Wildernesse (as write the authors before mentioned) and indeed such is the nature and disposition of the soyl thereof to this very day : for it will grow to frith or wood, if it be not continually manured and laboured with the plough and kept under by tillage ; so as it may truly be said of it, *Incolita reparantur vomere Sylva*. It is throughout (except in very few places adjoyning to brooks or Rivers) of a very barren nature, and unapt either for pasturage or tillage, untill that it be holpen by some manner of comfort, as dung, marle, fresh earth, fodder, ashes, or such other refreshings ; and thus seemeth to have been the cause for which in old time it was used as a Wildernesse, and kept for the most part with herds of Deer, and droves of hogs as is specified in divers historical relations.

And as there be yet remaining in *Sussex* divers great forests and sundry commons or wilsts, having five or six miles in length, which for the most part are not fit to be manured for Corn and yeeldeth but little profit in pasture ; so have there been also in *Kent* (within our memory) a great number of woody and over grown ground, converted of late, even after such a manner as in the said Perambulation is testified ; where it is said ; That although the Weald of *Kent* belonged to sundry known owners long since, yet was it not then allotted into particular Tenancies, as the other parts of the shire were, but it was, in proceesse of time, by little and little gained, as men were contented to inhabit there, and to rid it of the wood. And hercof it is also, that besides sundry whole parishes which

Denamed dens or low places, as *Sunderder*, *Alalden*, *Peneden*, and sundry other, there be moreover many smaller portions almost in every part of the Weald of *Kent*, which he likewise called Dens; as the Den of *Cranebrook* in *Cranebrook*, the Den of *Hawthurst* in *Hawthurst*, and such others; the which (as it seemeth) were at the first undertaken to be manured by sundry particular persons, whose names were then taken for those very Dennes and continued many yeares together, as by antient evidences it doth yet appear, howsoever the age of long time hath now almost worn and consumed them all out of knowledge. Neither doth the Weald of *Kent* contain so many great mannors or courts (for the proportion of the largenesse) as the rest of the Shire doth, but was appertaining, for a great part thereof, to sundry of those mannors which do lye at large dispersed thorow the shire, whereof each one had a great portion in the Weald, which both in the book of Domes-day, and in sundry the court-rolls, and Rentals, passeth by the name of Weald, and *Silva Portorum*, or swine gats, which were granted to divers of the farmers and owners of sundry tenancies which did belong unto those dens and other Lands within the Weald.

And albeit these dennes be for the most part good large portions of lands, that be now broken into many several possessions, so as the same one Denne suffieth twenty Householders at this day, yet it is very likely that each man at the first had his several Denne wholly and unbroken, whereof he and his posterity beareth name, untill that the same was by the custome of *Graveland*, by sale or by exchange divided and distributed amongst others into parts, as we do now see them. But howsoever this Weald be of it self unfruitfull (as I said) and of a barren Nature, yet so it hath pleased the providence of the Almighty to temper the same, that by the benefit of Margle or Marl (as it is commonly called) it may be made not only equal in fertility with the other grounds of the shire, as well for corn as Grass, but all superiour to the more and greater part of the same. The which manner of bettering the ground is not now newly discovered, but was the ancient practise of our forefathers many years agoe, as by the innumerable Marl pits digged and spent so many yeares past, the trees of 200, or 300.

years

Marling was discontinued and is now revived.

years old, do now grow upon them, it may most evidently appear; besides the which we have mention of Marle in books of gainage or husbandry, that were written in the dayes of *K. Ed. 4.* *viz.* the 2d. or before, howbeit the same manner of tillage, by means of the civil Warrs, maintained many yeares as well in the time of the Barons warrs, as of the warrs between the house of *York*, and the family of *Lancaster*, was so given over, and gone out of use, untill these thirty or forty years, that it may be said to have been then newly born and revived rather than restored, because the very true art of inriching the ground by Marle, seemeth to ly: hidden in part, as yet not to be discovered to the full: for in this short time we have seen many arable grounds, which for fundry years after the marling of them, have plentifully borne Wheat and other grain, to be now become unfruitfull, and so will they continue, albeit they shoul: be now marled again. And this commeth to passe by the ignorance of the right manner of ordering the Marle, which is as strong and cheerfull as ever it was before, howsoever it worketh not this naturall effect, through the unskilfulnesse of the Husbandman, that both wasteth the Marle, and loseth withall his time, his labour, his cost, and the profit of his ground. I cannot deny but a man shall see some grounds of nature fit to take Marle, and of situation so neer to Marle-pits long time opened, that they might be marled plentifully with little charge, and have been heretofore marled indeed, and yet the same to ly: now unplowed, and not only barren of themselves, but also unapt for marle, and incapable of amendment by tillage: but I must say withall, that albeit the men in those former ages had the right ordering of Marle, yet were they not all good Husbandmen alike, neither doth the field joy alike under the Farmer, and under the very Owner of the same, the one seeking the very uttermost gain that may be made during his short interest, and the other endeavouring to perpetuate his commodity, even to the end of his estate, which hath no end at all: so that through unskilfulness of the one, and greedinesse in others, the ground may soone be crammed to death with Marle, then it shall be made the better or fatter by it. The reason whereof I will referre untill that I have cause to teach in particular after what man-

me and measure the ground is to be marked. In the mean while I will open the nature and conditions of this Wealdish ground, comparing it with the Soyl of the shire at large, and afterward declare unto you what the Marl is, and what sorts thereof there be usually found in the Weald of Kent, and lastly enter into the true and profitable use thereof, as well in each sort of arable Land, as also for the increase of Corn and Pasture through the Kingdome.

The arable ground of this Weald hath commonly a fleet and shallow mould to be turned up by the Plough, so as in many places the dead earth or mould is within three inches of the surface of the ground, and in the best places, the good Mould exceedeth not six inches in depth at the most; and therefore, it is a weak convenient substance to nourish Corn any long time, but will faint and give over after a crop or two; for the which reason also, it cannot yield any sweet or deep grass. Besides this, the Weald hath many cold or hillish grounds, out of which there do many Cuts or Springs of water issue, that make it cold and barren; and from these hillocks, the best part of the good Mould is washed down into the Water-courses and Dikes that be made to divide and drain the Land. Furthermore the Weald is divided into many small inclosures, the biggest part (for the most part) of which, are between sixteen Acres and twelve in quantity, and hereby hath it many Hedges and Trees, which in unseasonable weather do keep both the Sunne and Wind from the Corn, so as for want of that succour and comfort, it groweth and many times rotteth in the earth, so that it can neither be sown, nor careth, nor prospereth not kindly many times. And these small Closes are caused by this, that, men are not able to Marle any great part or quantity of ground at once; and having marked a little, they are desirous to sow it, with Corn: for the preservation whereof, as also for draining it, they are enforced to make so many and small severalls: for all which reasons it is plain, that there is little good arable Land there, and rarely any good Pasture, those onely places excepted, which are amended by irrigations of floods, which there is called flowing and over-flowing. Contrarywise, the arable land of the Shire at large, hath a deep and fat Mould of good earth, that is

able to bear five or six good Crops together, without intermission; and after 3. or 4. years rest, will do the like again, and may so interchangeably keep that course for ever: yea, there be many grounds that are sowed without ceasing, because the Mould is so deep, that when the upper part thereof beginneth to faint and be weary, men can add some strength of Cattel, and with the Plough go deeper, and fetch up a fresh Mould that will continue for a long season. Furthermore this arable ground is a hollow dry ground, for the most part, on a deep Clay, that by tillage, and the weather, will become dry and spongy, so as the Rain there washeth in the fat of the earth, the rather because it is not so hillish and sliding as the Weald, but more leuell, eaven, and Champion also, by which the Sunne and Wind do dry the Corn, and do make it eare or care well, and yield a purer flowre then that which is sobbyed in wet, and hath long time lyen before it be dried again. But for as much as the great odds between these two sorts of grounds, may be made even by the help of *Marle*, if it be rightly ordered, as I said, I will not shew you what it is, and how many sorts thereof be found in this Weald of our Country. *Marle* is indeed, as it is in name, the fat or (marrow) of the earth: for so did the *Germanis*, and so did our elders the *Saxons* terme it, of the word *Marize* which we found *Marrow*, and thereof we call it *marling*, when we bestow that fat earth upon our lean ground. *Pliny* saith, that the *Brittains* (meaning us) did use to amend their Land with a certain invention which they called *marga*, that is, the fat of the earth, and it is to be seen in *Conradus Herberstein*, that the *Germanis* doe use it to the same end, and do call it by the same name till this very day: it is therefore a fat, oily and unctuous ground, lying in the belly of the earth, which is of a warm and moist temperature, and so most fertill; seeing that heat and moisture be the father and mother of generation and growth; howbeit this is not a pure and simple marrow (as that is which lyeth in our bones) but a juyce, or fat liquor mingled with the earth; as is the fat which lyeth mixed, and dispersed in our flesh, so as the one may be drawn away, and the other remain as it shall anon appear unto you.

Four sorts of
Marle.

Four sorts of *Marle* be found in this Weald, known asunder

see by the difference of colours, and thereby also differing in degrees of goodnesse one from the other: for there is a gray, a blew, a yellow, and red Marle, all which be profitable, if they be earthy and fat, or slippery as soape: and most times little worth, if they be mixed with sand, gravell, or stone. So the blew is reputed the best, the yellow the next, the gray the next, and the red lesse durable then the other three; and yet it is thought the red to be the better, if it be bound upon the blew, or others. These Marles do lye in rains or flowers, amongst those hillocks or copp'd grounds most commonly, whereof I have spoken, and do oftentimes shew themselves at the foot of the hill, or about the mid way, between the foot and the top thereof: some of them have over them a cover of ground, which we call Cope, not exceeding seven or eight foot in depth, some lye deeper, and other some do arise, as namely, where the ground lyeth not high, and that Marle commonly is very good; and there is in diverse levell grounds good Marle.

And as Marle is for the most part of these four colours, so is arable ground for the most part of these four sort following; that is to say, either a cold, stiffe and wet clay which is either the Cope of the Marle, or lyeth neer unto it, and is therefore commonly called, *The Marle Cope ground*, or a Hazell Mould, which I count to be one of the best wealdish Moulds, being a compound Mould, and very good for Marle, and will quit the cost very well. Then there are two sorts of sandy Mould, the one being a reasonable good kind, but not equall to the hazell Mould, for you shall have in diverse places of the Weald, this hazell mould to bear two or three good crops of Wheat, being Summer fallowed, together, which you shall hardly have of any sandy ground without mending: but as I said of the better sort of these two kinds of sandy moulds, you have commonly very rich Wheat, being well Marled, which is not so barren as the other; but this last kind of sandy Mould is a very barren kind of ground, and hath a very fleet Mould, and you shall have very heath grow upon it in divers places, and yet being ordered, as followeth, with Marle, will bear both good Corn

1. 2.
3. 4.

Four sorts of
Grounds.
1.

2.

3. 4.

and Pasture. And now that we may the better understand how to Marle and Manure every of these sorts by it self, you must know, that the hazell ground being dry, and not subject to Winter-springs, or tears of water, (for which, some call such, A whining or weeping ground) is to be handled thus.

The ordering
of the Hazell-
Mould.

First, Plough it as deep as you can, with the strength of eight beasts at the least; and be not afraid to Plough up some part of the dead earth that lyeth under the upper good Mould: for the Sun, the Rain, the Wind, and the Frost, will in time mellow and amend it; and besides that, the Mould will be the deeper for a long time after, and thereby keep it self the longer from being stiffened with the Marle. Then you may bestow 500. Cart-loads (as we call them) of Marle upon each acre thereof, every load containing 10. or 12. bushels of eight gallons, and each acre containing 160. rods of 16. foot and a half to a rod. Then also you may chuse whether at the first breaking up you will sow it with Oates, to kill the grasse, or else first Marle it, and sow it with Wheat, or otherwise Summer-fallow it in the *May* after the Oates, and then Marle it, and sow it with Wheat. Upon that fallow or gratten, (as we call it) you shall do well to sow it with Pease, and at *Michielmas* following, to sow that Pease stubble or gratten with Wheat again, which also will be the better, if the Summer wherein it carried Pease, were moist; because the Pease being rich and thick, do destroy the Grasse, that together with the washing of the fallowes by rain, doth greatly consume the heart and vertue; or, as we call it, the state of the ground. But if that Summer were dry, then is a fallow best, because the Sunne with his heat doth much good to the ground, and inableth it the better to bear out the weather in the Wheat season ensuing. If you like to sow it, as I said, with Pease, sow them as carely and timely as you may, for they will be so much the sooner harvested, and then also you may Plough or stirre your gratten the sooner, whereby it will be the better hardned to bear out the weather in the time of sowing of your Wheat: but I doubt, Pease doth somewhat stiffen it. Two bushels of Wheat do suffice for the sowing of an acre hereof, except it be for the first crop, after
the

the new breaking up of the ground; during which time, there is found a worm, called an *Emble*, which in *French* signifies Corn in the ground, being of colour yellow, and of an inch in length, and will eat some part of the Corn; but if you sow it thick, it will be both small eared, and thick, and slender of straw, which the Rain and Wind will beat and hurle down, and then it will scarcely rise again; or if it do, yet through the narrowness of the shadow of the Trees and Hedges, that in formal places be many, it will rather rot for want of drying, than come to maturity, that is, to perfect hard, and full grown Corn. After your first Mowing, you must carefully follow, that you plough not the ground either with broad or beaver Furrowes, but fleet and narrow, lest you cast your seed into the dead Mould, for Marl differeth much from Dung in this behalfe; Dung ascendeth it self upward, and howsoever deep it lye, the vertue thereof will ascend: but Mirk, (as saith Sir *Walter Henly*, in his Husbandry) sendeth his vertue downward, and must therefore be kept aloft, and may not be buried in any wise. Furthermore, if your ground be hillish or coppied, it shall be fit that you make your Ridges 7. or 8. foot broad at the least; for in such falling Lands, the more broad Furrowes you make, you must make many, where you make Ridges, the more of your Mirk shall be washed, and carried into the bottoms. It is good also to draw a crosse or quarter-Furrow, and opening the ends of your land Furrowes stopped, into it, to leave the other ends of your Furrowes, that the water-foot runne not all the length of the field. Again, this ground will alwaies be sown under furrow, and that also before *Michaelmas*, if the season will so permit: for this ground (if it be well husbanded) will be mellow and hollow, or loose, whereby though Rain and Frost, it would sinke down from the root of the Wheat, if it should be sown above Furrow, the which being uncovered, must needs be bitten and killed with the cold. It is also very fit that you harrow not this sort of ground too small, but that you leave the clods as big as a bowl, the which being mouldred with snow and the frost, will both cover and keep warm what is underneath

neath. Moreover, it shall be good, that upon some fair and dry day, in the beginning of *March*, you put your flock of Sheep into your Wheat, that with their trampling upon it, the Corn may be well, and fast closed with the earth, yea, and presently after (if it will bear foot) you may roll it as you do *Bailey*, whereby both the Clods shall be broken, and the Gratten or stubble shall be more even and ready for the Mower. Generally you must understand, that after you have bestowed your *Marle* in the field, you ought to let it lye unspread abroad, untill you be ready to plough, and then immediately after the spreading of it, turn it into the ground with the Plough; for otherwise, if it should lye long spread in the field, the Sunne will spend no small part of the fatness thereof, although I know many desire it, because it will be the smaller being burned with the Sunne; which I like not. And therefore also no good Husband will carry and spend his dung in the time of Summer, except he do presently withall plough it into the ground; for although the Mould of the arable Land it selfe will take good, if it be turned to the Sunne, which will both dry and fasten it, yet the matter fareth fartherwise with the *Marle*, from which if the Sunne shall draw and suck the fat moisture that maketh the Land fertile, then becometh it (as *Columella* speaketh of the worst sort of ground) *Solum siccum, pariter & densum & macrum, quod siue excecet, siue cessat colono refugendum est.* It becometh (saith he) a dry, thick, and lean Clod, which whether it be tilled or laid to rest, must be forsaken of the Husbandman as unprofitable. And now your Hazell mould being thus marled, plowed, sown, and manured, you may not charge with Wheat above twice, and then it must rest five or six years together; all which time it will bear a very good and sweet Pasture, well set with a white Clover, or three leaved grasse, most bating and profitable, both for Sheep and Bullocks.

After those years ended, it will grow to some Mousse, or will peradventure cast up Broom; and then it is time to break it up, and sow and handle it as before, for two other Wheat-seasons or crops, leaying it a Wheat-gratten or stubble, rather than with an Oat gratten or stubble, which
bur-

barneth the Land being marled. Being thus interchangeably sowed and rested, your Hazell mould will continue good arable and pasture, by the space of thirty years together, whereas if it should be continually sowed, six, or seven, or more years together without rest, it will become utterly unfruitfull, both for Corn and Cattell also. Neither will it any thing avail to marle it over again, when it is so decayed, because the former marle having his juice exhausted by continuall Tillage, whereof the Corn sucketh one part, and the Sunne, Wind, and Weather dry and wasteth the rest, is but a dead Clod (as I said) that is not capable of new *Marle* to amend it, nor casteth any profitable grasse at all. For proof hereof, I my self have seen, that the common carth of High-ways, by treading of Cattell, washing of Rain, and the drying of the Sunne and weather, by separated from the naturall juice, which it had in the pit, and spreading it upon the ground, I saw that the land was not only not amended; but much the worse by it. And now for an end of handling this sort of Hazell ground; if it shall appear unto you that five hundred loads of Marle upon the Acre, have changed, stiffened, and too fast bound your land (as indeed the nature of *Marle* is to bind and to stiffen) then take you some of these waies to help it: either rest it four or five years, or fodder upon it before you bring it up with so many Cattell as you may; or take the uppermost part of your Ditches or Fore-lands, or wast places of your fields which you may mingle with Dung, and which, before you sow your Wheat, you may lay upon your fallow and stir it in with your plough, and by this you shall both loosen your *Marle*, and refresh your ground: so that within forty years, the mould of your ground will clean eat up and swallow the *Marle* that you lay upon it; and then become hungry, and is capable of Marle again as it was before at the first.

And by this also you may see the very cause for which it is good, not to sow your marled land continually, but to pasture it by turns, and so give it rest; namely, because the continuall plowing doth exhaust and spend the fat of the Marle, leaving the drossie, dry, and fruitless parts thereof, to lye and cover the face of your ground: whereas pasturage, through the dunging,

treading, and foddering of Cattell, doth increase a new Mould, which mingling it self with the dead Mould, doth in the end give some life and heart unto it. And therefore these Farmers and Owners that have been at the cost to Marle their ground, and will not forbear to till it, but hastening to raise their charge, do thereby utterly strike it with barrenesse, are like to *Aesop's* man, who having a Hen that layed him every day a golden Egge, and being greedy to have all the gold at once, did therefore kill the Hen, thinking to have found her belly full of gold, and so was both defrauded of that he looked for, and left also what he had before. Hitherto of the nature, ordering and marling of this hazell ground. Generally now for the continuall fallowing and stirring thereof, you must understand, it may neither be fallowed wet, lest it answer more Grass than Corn; nor yet so dry, that the dead bottom swell up, as in great drowth it will, and swallow the good Mould that lyeth above: and therefore bind not your selfe to any precise time of any month, but the opportunity either in *May*, or *June*, as you shall find the weather to have prepared it for your desire. In the like temper you ought to stir it after a shower, after *Saint James* his day, or in the end of *July*, for so will it be dry and hard before the time of sowing: whereas if it be stirred later, every small Rain will destemper it into Dirt or Mire, by reason of the tenderness thereof, and then can you not sely bestow your seed upon it.

The ordering
of the Marle
Cope ground.

The Marle Cope ground followeth, which is most commonly, (as I said) a stiffe, wet, cold Clay, and not so fit as the former to be marled for Corn, except in some few these places thereof, but yet it may serve for Pasture or for *Oats*; such of the as be marled, must be fallowed fleetly or shallow, lest the marle become drowned in the wet: then being marled, they may in dry Summers, (and not over-moist Countries) bear Wheat in some mediocrity. Three hundred loads at the most of Marle are sufficient for an acre of this kind, and two bushels and a halfe of Wheate will sow the same, which must be cast above furrow, fourteen, or twenty dayes before *Michaelmas*. It requireth round, high, and narrow Ridges, and that

the

the water furrows be stricken somewhat deep, the better to convey moisture from the Corn, and that it be left cloddy as much as may be : and yet to say the truth, such as will convert this sort of ground to Tillage, must provide a greater quantity of rich ground or Greet (as we te m it) and Dung, than of Marl it self to amend this Land withall. But if there be any ground that is light and whining, or weeping, because of Springs that are therein, and therewith doth cast up Rushes, Rushes. let that be marked upon the green Land with four hundred or five hundred loads upon the acre, about the latter end of Summer : for so wil the Marl sink into it, and cast up a sweet grasse for eight or ten yeares together, and until that the Marle be sunk so low, that another sward or crust of earth be grown over it, and then it is fit time to plow it, but yet very flete and narrow, for so will it bear good Oats ; but if it be so wet that you cannot adventure to sow your Wheat upon it, because the Rushes be not killed with this first plowing, then may you sow it againe with Oates, drawing good water-furrowes to drain it, because it will be the wetter for plowing, and thereby the Marl also will the sooner lose his force, thus doing, let it lye to pasture again.

There be some other grounds of the Marle Cope, which carry a soure Grasse, and the Dyers weed, (commonly called Greening weed) and having a great tore thereof, the which also may be amended by three hundred or four hundred load of Marle upon the acre of the greeen land : for the Marle wil both rot the tore or vesture thereof, and also enrich the Mould very much ; so as it will answer good pasture twelve years after : and when you shall perceive that the Marle is well sunk, then may it be Ploughed flete and narrow, sowed with Oats and fallowes ; so may it both bear good Wheat, if it find a good season, and be the richer a long time after partly by the benefit of the Marle, partly by the rotting of the tore and sward, and partly by the dung and water of the Cattel that pasture upon it : for the sweeter the Pasture is, the more beasts it feedeth, and the more beasts it beareth, the more it selfe is amended by it.

Touching the fallowing of this ground, great heed is required: for as it swelleth more then the Hazel-ground, if it be taken hard and dry, so it is more grassie then that, or the Sandy Soyl if you fallow it wet: The season therefore followeth commonly in *April*, or in the beginning of *May*, for to fallow it, and to stir it about *Midsummer*, or so soon after as the rain shall have prepared it meet for your unshod Oxen to labour upon it. Many men fearing to hit the right season for this ground in the Spring of the year, do make it ready by a winter fallow before *Christmas*, and by stirring it before *Midsummer*, if they may; which manner is not to be misliked.

The ordering
of the sandy
moulds.

Lastly, cometh the two sorts of Sandy-ground, and gravelly mould, the one being to be ordered much after the hazel mould, saving he would have somewhat more Marle, and also would be favoured more in the often tillage, than it: for the hazel mould will bear or endure more than the Sand. But this last sort of sandy-ground, being a very staring sand (as wee use to call it) for much of it will bear Heath, being of it selfe very barren and very fleet or shallow mould, and over-hot and dry, and by reason of that extremity, is unfertile except it be marked very plentifully. And therefore when you brake up this ground, Plough it as deep as you may, not fearing to cut down the best Mould thereof, because the Marle will pierce thorow, and sink down into it. An acre of this ground requireth five hundred or six hundred loads of your *Marle* at the least. So alwaies under furrow about *Michaelmas* with two bushels and a halfe upon the acre, which it will better carry than the Hazel ground: for although the straw be smal, yet will it be harder, and stand better than that of the other. The worin whereof I spake, will be busie with that, that groweth on this sort of ground, until that the heat thereof be somewhat aswaged by the *Marle*. If your ground be hilly, make your Water furrows in such sort, as I have said before, for the saving both of your *Marl* and Mould, harrow it very little, leave it as cloddie as you may. After that you have taken a Crop from it, fallow that Wheat Gratten or Stubble in *May*; after that stir it also, and then about *Michaelmas* sow it with Wheat again: for

it is not yet rich enough to bear you good Pease. This done let it rest four or five yeares, and if it send up any plenty of becom cut or pul them when they be of some mean bignesse, but plough not the ground until it have taken such rest; and after it, you may well break it up of new, and sow it with Oates: which Oats-gratten or Stubble, you must summer-fallow, when it is at the Harveft: and then if you desire to have it in good heart, you must Marle it with three hundred or four hundred loads upon the Acre again. After this Crop thus taken, rest it five or six yeares, and then take one Crop more of Oats from it, and after a Summer fallow, sow it with Wheat, and suffer it to be a Wheat Gratten or Stubble, till it shall have rested as before is appointed for the hazel ground; and so it will be the better thirty or forty yeares after the marling. We have in this Weald a sandy and gravelly ground that is wet and weeping, the which is scarcely worth the marling, except the nearnesse of the *Mud*, and thereby the small cost and charge thereof, may induce a man to bestow the cost upon it with *Marl*, and then the best way is to Marl upon the green Land, or upon a fallow, with 500. loads or more upon the Acre, or rather to take the profit thereof by Pasture then by Tillage: for it will hardly bear good Corn, which is soon killed with wet vapour that is continually sent up from the wet springs that lye under it. This sort of wet ground is to be fallowed, when it is both hard and dry, because it swelleth not as doth the hazel Mould, and may therefore be taken in *June*, if former fair weather bring it to a dry season; and it is to be stirred also after a shewre, in the like plight as the hazel mould before. Your marleable ground being ordered in this wise, severally set down for each kind of them, will continually stand fruitfull either for Corn or pasture, and albeit the high prices which Corn hath of late years carried, may allure some men to sow Corn incessantly and thereby to spend their *Marls*, and to choak their arable in the end; yet I doubt not but the wiser sort can see that it is much better to maintain their grounds hearty and in good plight forever, then to raise a short gaine, that will bring a long and perpetual losse upon them: the rather also, because that Butter,

Cheese, and the flesh of beef and mutton be advanced in price equally, if not beyond Wheat, Rye, Barley, and the other grains. Howbeit, a good Husband will make his profit of them both : for if he have one hundred, or one hundred and twenty acres of this Wealdish arable, he will so *Marle* and manure them, that dividing his land into five or six equal parts, he may continually plough twenty, or five and twenty acres for corn, and yet lay to pasture the rest by turns, so that by the help of his *Marle* his land shall be continually rich and profitable, both in the one and other of them. And thus I have spoken of the Weald, describing the nature and property thereof : so may every man of discretion and judgment, which shall meet with earth of the same quality and condition (in what part of this Kingdome soever) make application of these Rules before rehearsed, and no doubt but the profit will make both the labour and cost profitable and pleasant.



*The several wayes, according to the opinion
of Writers, and the certain wayes, according to the
experience of Husbandmen, for the destruction of Moales,
or Moales which digge and root up the earth, and how to
reduce and bring the ground to the first goodnesse,
having been spoyled by them.*

IT is needlesse either to describe the nature and quality of this
Vermine, or the injury and hurt which they do to the Hus-
bandmen, Gardiner, and Planter, since no Country is exempt
from their annoyance : but touching the remedies, they are of
greater secrecie, and therefore I thought good in this place to in-
sert them.

The antient Writers are of divers opinions, touching the
manner of destroying this creature, and therefore have left unto
us sundry medicines how to work the same : amongst the which
one writeth as an approved experiment, that if you take Wal-
nut Shells, and fill them with brimstone, chaff, and Petrosin and
then setting them on fire, put them into holes or trenches,
through which the Moal passeth, the very smel or stink thereof will
poison them ; so that if you digge, you shal find them dead in
their holes.

Another affirmeth, that if you take brimstone, and rank stinking
litter of horses, and burn it in the holes or haunts of the Moals, it
also will impoison them, so as you shall find they will come out of
their Caves, and lye dead upon the green gras.

A third affirm-s, That if you take green Leeks, Garlick, or
Onions, and chapping them grossely, thrust it into the holes,
the very fume or savour thereof will so astonish and amaze
the Moales, that they will presently forsake the earth
and falling into a trance, you may take them up with your
hands. Now there is not any of these medicines which can

be dis-allowed ; for there is no doubt but that they will work the effects spoken of, if the Moal can bee brought to take a full sent thereof ; but it is a Vermine curious of sent, and passing quick of hearing, and being in a spacious ground, will prevent these baits : and therefore they are rather to be applied for Gardens or little grounds, where there is but a Moal or two, then in large fields, where there be many hundreds.

To conclude for this matter of medicines, or for the helping of Gardens, Hop-yards, or any smal spot of ground, there is not any thing held more available, than to sow in that place the hearb called *Pa'ma C bristi* ; for it is found by certain experience, that wheresoever that hearb groweth naturally of it selfe, or otherwise is either purposely sown or planted, therein no wile will any Moal abide.

Thus much I thought good to shew you for the use of medicine, and for clearing of small grounds : now for the annoyances which happen to great, large, and spacious fields, through the multitude of Moals, there is only three absolute wayes for the curing of the same.

The first is, in the months of *March* and *April*, to view where they cast, and go about to make an extraordinary great hill, in which they build them nests, which is known by the newnesse of the Mould ; then look for the new trench which leadeth to the same ; for as she goeth she returneth : then with your Moal-spade open the trench in divers places, and then very still and silently, and observing to take the wind, to prevent both hearing and smelling, watch the Moale as she goeth or returneth, which is, Morning Noon, and Evening, and as soon as you see her cast, strike her with your Moale-speare, made of many sharpe pikes, and so cast her up, and kill her. Thus have I seene by one man an hundred destroyed in one day.

The next infallible way for the destruction of Moales is, If you can by any possible meanes bring in water to over-flow and wash your ground, and as soon as the earth is wet over, the Moales will come forth of themselves, and you may gather
ther

ther them up with your hands at pleasure.

The last (indeed as much approved as any) is to take a live Moale in the month of *March*, which is their bucking or ingendring time, and put it into a deep brass Bason, or other deep smooth Vessel, out of which the Moal cannot creep, and then at evening bury it in the earth up to the brimme, and so leave it, and the imprisoned Moal will presently begin to strike, complain, or call, so that all the Moals in the ground will come to it, and tumbling into the Vessel, they are prisoners also, and the more prisoners, the greater will be the noise : and the more noise, the more Moales will come to the rescue : so that I have seen 50. or 60 taken in one night, and in one vessel or brass Kettle.

Now having thus learned how to destroy the Moales, it is meet you also know how to prevent the coming in of forraign Moales ; because though you keep your ground new so clean, yet if your next neighbour be an ill husband, his field may soon imployson yours again : therefore to prevent the coming in of any forreign Moale, make but little furrowes or Trenches about your ground, and scatter in them small round balls made of Hemp-seed, or Hemp-seed and *Palme Christ* beaten together, and you shall not need to fear the coming in of any Neighbouring Moales, how many soever there be about you.

Lastly, for the reducing or bringing the ground to the first perfection again (for howsoever some Husbandmen say, Moe Moal-hills, moe ground : yet 'tis certaine, that moe Moale-hills, lesse good ground) for never was yet sweet grass scene on a Moale hill ; therefore to bring it to perfection, which I mean to be meadow ground, or ground to be mown, which Moal-hills cannot be, you shall first with a sharp paring shovel pare off the swarth about three fingers deep, for fear of hurting the roots of the grasse : and then the swarth taken off, digge away the rest of the Mould, and scatter it as small as you can round about the hill, then take the green swarth, and cutting it artificially, lay it close and fast, and levell, where you took away the Mould, as if there had never been Hill there : and thus do to all your hills, though they be never
so

so innumerable ; and after all your ground is levelled, as soon as the first shoure falleth, runne all your ground over with a pair of back Harrows, or an Harrow made of a Thorn bush and it will break the mould as small as ashes, which will so comfort and refresh the root of the grasse, that it will grow in infinite abundance ; and sowrenesse which was caused by reason of the Hills, will come again to a perfect sweetnesse, and the meadow will be more fruitfull then before by many degrees. And thus much for the destruction of Moals, and the reducing of the earth to his first goodnes.

FINIS.

Markham's Farewell to

HUSBANDRY :

OR,

THE ENRICHING OF ALL
Sorts of Barren and Sterile Grounds in
our Nation, to be as fruitfull in all manner
of Grain, Pulle and Graffe, as the best
grounds whatsoever.

Together with the annoyances, and preservation
of all Grain and Seed, from one year to many years.

Also a husbandly computation of Men and Cattel's daily
Labours, their expences, Charges, and utmost profits.

Now newly the Seventh time, revis'd, corrected & amended,
together with many new Additions, and cheap experiments :

For the bettering of Arable Pasture, and Woody
Grounds. Or making good all Grounds again, spoyled with
the flowing of salt water by Sea-breaches; as also, the enrich-
ing of the Hop-garden. And many other things never
published before.

By G. M.

L O N D O N,

Printed by W. Wilson, for George Sawbridge, at
the Bible on Ludgate-hill, near Fleet-
bridge, 1660.



TO THE RIGHT
WORSHIPFULL
and his most worthy Friend
Mr. Bonham Norton Esq ;

Worthy Sir,

Knowledge, which is the divine mother of certain Goodnesse , never came unwelcome to a knowing Judgement ; no more I hope, shall this my labour to your worthy Self, since doubtlesse you shall find in it many things New, some things necessary, and such which hath not in it some particular touch of profit. It is a work your former encouragements to my other labours did create in me, and the wants you earthly found , I hope shall bring you supplies both wholesome and becoming. The experience, I

D 2 assure

assure your goodnesse, was the expence of a bitter
and tedious Winter; but the contentment (in gaining
my wish) made it more pleasant then all the three o-
ther Seasons. What ever it be, it comes to you full of
love, full of service. And since I know vertue mea-
sureth all things by its own goodness; it is enough
to me, that I know you are that Vertue. In you is
power to judge, in you is Authority to exercise Mer-
cy; let them both flye from your goodnesse with that
mildnesse, that in them my hopes may be crowned,
and my self rest ever at your service.

GERVACE MARKHAM.

The



The Preface to the Reader.

Shewing the use, profit, and truth of the Work.

THe use and application of this work, (gentle Reader) is to reduce the Hard, Barren, and Sterile grounds, such as were never fruitfull, or such as have been fruitfull, and are made barren by ill Husbandry, to be generally as fruitfull as any ground whatsoever: from whence shall ensue these generall profits.

First, Plenty of Corn and Pulse; because all grounds being made able and apt for Tillage, the Kingdome may afford to sow for one bushell that is now, hereafter five hundred, so mighty great are the unfruitfull wastes of Heathes, Downes, Moors, and such like, which at this day lie unprofitably; and to this abundance of Corn will arise an equall abundance of Grasse and Pasture: for as the best ground of the worst is to be converted to Pasture, and the worst to Tillage; so that worst being tilled and drest, when it hath done bearing of Corn, (which will be in six or seven years) shall for as many years more bear as good Pasture either for breeding or feeding as can be required, and then being newly drest again, shall newly flourish in its first profit.

Secondly, whereas in fruitfull places, the third or fourth part of all arable ground, is lost in the fallow or tith ground, now in these barren grounds, you shall keep no fallow field at all, but all shall bear either Corn or Grasse; that fallow part
serving

To the Reader.

serting to pay for the charge bestowed on it, and the rest.

Lastly, whereas in fertile grounds you cannot have either wheat, Barley, or Rye, under two, three, four, five, and sometimes six severall plannings, as following in January and February, Stirring in April and May, Soiling in July and August, Winter-ridging in October and November, and Sowing, with other Actions; now in these hard grounds restored, you shall not plow above twice at the most, to the saving of the Husbandmans pains, his Cattels travail, and a larger limitation of time for other necessary businesses.

For the truth of the work, he that will ride into the barren parts of Devonshire or Cornwall, into the Mountainous parts of Wales, into the hard parts of Middlesex, or Derbyshire, or into the cold parts of Northumberland, Cumberland, Westmerland, Lancashire, or Cheshire; shall find, where industry is used, a full satisfaction for all that is here written.

Farewell.

Thine, G. M.



MARKHAM HIS Farewell to Husbandry.

CHAP. I.

The Nature of Grounds in generall; But particularly of the barren and sterill sorts.

DO come to the full effect of my purpose without any preambulation; I intend first to the curious; (for to the honest & virtuous are all mine endeavors directed) you shall understand that it is meet, that every Husbandman be skillfull in the true knowledge of the natures of grounds; and which is fruitfull, which not: of which in my first Books I have written sufficiently; nor do I in this book intend to write any title that is in them contained; for as I have not *Tautology*, so I durst not hate to wrong my self.

Grounds, then, as I have formerly written in my first books, being simple or compounded, as simple Clays, Sands, or Gravels together, may be all good, and all fit to bring forth increase; or all evill and barren, and unfit for profit: for every Earth, whether it be simple or compound, whether of it self or of double mixture, doth participate wholly with the Climate wherein it lyeth; and as that is more hot, or more cold, more moist or more dry, so is the earth evill more or less fruitfull. Yet for the better understanding of the plaine

Comm.

Country man, you shall know that both the fruitfull and unfruitfull Grounds have their severall faces and characters whereby they be as well known, as by the clime or situation of the continent; for that ground, which, though it bear not any extraordinary abundance of grasse, yet will load it self with strong and lusty weeds, as Hamlocks, Docks, Mallowes, Nettles, Kettleck, and such like, is undoubtedly a most rich and fruitfull ground for any grain whatsoever. Also, that ground which beareth Reeds, Rushes, Clover, Daisie, and such like is ever fruitfull in grasse and Herbage, so that small cost, and lesse labour in such grounds, will ever make good the profit of the Husbandman: But with these rich grounds, at this time I have nothing to doe.

To come down then to the barren and unwholesome Grounds, you shall understand that they are to be known three severall wayes: first, by the Clime and Continent wherein they lye; next, by their constitution and condition; and lastly, by outward faces and characters. By the Clime and continent, as when the ground lyes farre & mote from the Sunne, or when it lyes mountainous and high, stony and rocky; or so neer unto the skirts and borders of the Sea, that the continuall Fogges, Storms, Mists, and ill Vapours arising from thence do poyson and starve the earth: all which are most apparent signes of barrenesse. By the Constitution and Condition, as when the ground is either too extreemly cold and moyst, or else too violently hot and dry; either of which produceth much hardnesse to bring forth, and sheweth the earth, so lying to be good for little or no profit. By the outward faces and Characters, as when you see (instead of Grasse, which would be green, flowry, and thick growing) a pale thin mossie substance cover the earth, as most commonly is upon all high Plains, Heathes, Downes, and such like: or when you see the ground covered with Heath, Ling, Broom, Braken, Gorse, or such like; they be most apparent signes of infinite great barrennesse, as may be seen in many Moors, Forrests, and other wild and wordy places. And of these unfertile places, you shall understand that it is the clay ground, which for the most part brings forth the Masse, the Broom, the Gorse, and such like: the Sand, which bringeth forth Brakes, Ling, Heath; and

and the mixt earth, which utters Whinnes, bryars, and a world of such like unnatural and bastardy Issues.

Thus having a true knowledge of the Nature and Condition of your ground, you shal then proceed to the ordering, earing, and dressing of the same, whereby it may not only be purged and clenfed from those faults which hindered the increase thereof, but also so much battered and refined, that the best ground may not boast of more ample increase, nor your more fruitfull placed Neighbours exceed you in any thing, more then in a little case.

CHAP. II.

Of the Ordering, Tilling, and Dressing of all sorts of plain barren Claves, whether they be simple or compound.

THou whom it hath pleased God to place upon a barren and hard soyl, whose bread must evermore be ground with sweat and labour, that maist nobly and victoriously boast the conquest of the earth, having conquered Nature by altering Nature, and yet made nature better than she was before : thou I say that takest this honest delight in goodnesse, hearken unto these following Precepts.

As soon as thou hast well pondered and considered the nature of thy ground, and dost find that it is altogether barren & unfruitful, the clyme and condition not suffering it to bring forth anything of worth or profit, and that thou hast well weighed what manner of earth it is, as that namely it is either a simple Clay, or a Clay so mixt with other earths, that yet notwithstanding the Clay is the most predominant; thou shalt then select or chuse out of this earth so much as to thy self shal seem convenient, it being answerable to the strength of thy Teams, and the ability of thy purse and labour to compassse; and this earth so chosen out, thou shalt about the beginning of May, in a fair season break up with a strong Plough, such as is generally used in all strong Clay grounds, the Share being rather long then broad, and the Coultter rather somewhat bending then streight and even, according as the nature of the ground shall require,

The first enrichting of barren Grounds.

which every simple Plough-man will soon find out in turning up two or three furrows ; for according to the cutting of the earth, so must the Husbandman fashion the temper of his Plough.

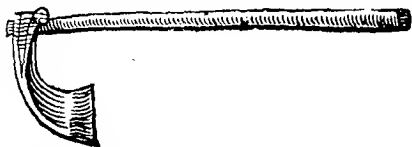
The manner
of Ploughing.

Now for the manner of plowing this bad and barren earth, if the ground lye free from water (which commonly all evil barren earths do) you shall then throw down your Furrows flat, and betwixt every Furrow you shall leave a baulke of earth half as broad as the Furrow, and so go over, and plow your whole earth up, without making any difference or distinction of lands : but if you fear any annoyance of Water, then you shall lay your Furrows more high, near, and close together, dividing the grounds into severall lands, and proportioning every land to lye the highest in the midst, so that the water may have a descent or passage on either side.

Hacking of
Ground.

Now so soon as you have thus plowed up your land, and turned all the swarth inward unto the earth, you shall then take Hacks of iron, well steeled and reasonable sharp, such a competent number, as your purse or power can compass, or the greatness of your ground requireth : for you shall understand that one good hacker, being a lusty labourer, will at good ease hack or cut more than half an acre of ground in a day ; and with these hacks you shall hew and cut to pieces all the earth formerly plowed up furrow by furrow ; and not the furrows onely, but also each severall baulke that was left between, and any other green swarth whatsoever the plough had escaped, and it shall be cut into as smal peeces as conveniently as you can ; for thereby is your mould made much more mellow and plentifull, and your Seed at such time as it is to be cast into the earth, a great deal the better and safer covered, and much more sooner made to sprout and bring forth increase. Now for the shape and fashion of these Hacks, you shall behold it in this figure,

When



When you have thus hacked all your ground, and broke in peeces all hard crusts and roughnesse of the swarth, you shall then immediately, with all the convenient speed you can (because time is very precious in these labours) if you be neer unto any part of the Sea-coast, or to any other creek or River, where the salt water hath a continuall recourse, thence fetch (either on horse-back, or in Cart, or other Tumbril, such as the nature of the Country, or your own ease can afford) great store of the salt sand, and with it cover your ground which hath bene formerly plowed and hacked, allowing unto every acre of ground, three-score or fourscore full bushels of sand, which is a very good and competent proportion ; and this sand thus laid, shall be very well spread and mixed among the other hacked and broken earth. And herein is to be noted, that not any other sand but the salt is good or available for this purpose, because it is the brine and saltnesse of the same which breedeth this fertility and fruitfulness in the earth, choaking the growth of all weeds and bad things which would sprout from the earth, and giving strength, vigour, and comfort to all kind of grain or pulse or any fruit of better nature.

Sanding of
Ground.

When you have thus sanded your earth, you shall then if you have any Limestones about your grounds (as barren earths are seldome without) or if you have any quarries of stone (which are seldome unaccompanied with Lime-stone) gather such Lime-stone together, and make a Kiln in the most convenient place you have, as well for the carriage of the Lime, as for the gathering together of the stone, and having burnt your Lime, the manner whereof is so generally well known through the whole Kingdome, that in this place it needeth little or no repetition, you shall then on every Acre so formerly plowed, hacked, and sanded, blow at least forty or else fifty bushels of lime, spreading and

Liming of
Ground.

mixing it exceedingly wel with the other sand and earth ; and herein is to be noted, that the stronger and sharper the Lime is, the better the earth wil be made thereby, and the greater encrease and profit will issue from the same : neither shal you need to respect the colour and complexion of the Lime, as whether it be purely white (as that which is made from Chalke) or gray (as that which is made from the smal Lime-stone) or else blackish brown (as that which is made from the great stone and main Quarry) since it is the strength and goodnesse of the Lime, not the beauty and colour, which brings forth the profits.

Manuring of
Ground,

Now that this Lime is of excellent use, and wonderful profit, do but behold almost all the Countries of the Kingdome where there is any barrenesse, and you shal find and see how frequently Lime is used, in so much that of mine own knowledge in some Countries where (in times past) there was one Bushe! made or used, there is now many loads, and all risen from the profitable experience which men have found in the same.

Now, when you have thus Limed your ground, you shal then take of the best manure you have, as Oxe, Cow, or Horse-dung, Straw rotted either by the littering of beasts or by casting upon high-wayes, the mud of Lakes, Ponds or Ditches ; the soyle of young Cattel made in the Winter time by feeding at stand, Heaks, or any such like kind of Ordure ; and this manure or compost you shall carry forth either on Horse back, or in Cartes or Tumbrils (according as the Country wil afford) and you shal lay it and spread it upon your ground so formerly plowed, Hackt, Sanded, and Limed in very plentiful manner, so far forth as your provision wil extend for it is to be understood, that barren and hard earths can never be overladed with good manure or compost, since it is onely the want of warmth and fatnesse, which manure breedeth and causeth all manner of fruitfulness.

Times for all
labours,

After you have thus manured all your ground, it is to be supposed that the season of the year wil be shot on, for the labour of sanding wil take little lesse than two months, your ground being of an indifferent great quantity, except you have assistance and help of many of your friends, which is a courtesie that

that every Husbandman may embrace, but not trust unto ; for I would not wish any man that hath not Tenants to command, to presume on other friends, lest they fail him, and so his work lye halfe done, and halfe undone, which is a great Character of negligence and improvidence : but let every one proportion their labours according to their own strengths, and the number of their ordinary families. The Liming of your ground will take at least half so much time as the sanding, and the Manuring rather more than lesse than the Liming; so that by any reasonable computation of time, beginning to plow your ground at the beginning of *May*, ere it be Hackt, Sanded, Limed, and Manured, *Michaëlmass* will be come, which is the end of *September*, for I allow the month of *May* to plowing and hacking; *June* and *July* for Sanding; *August* for Liming; and *September* for Manuring. So then to proceed on with our labour, at *Michaëlmass*, or from that time to the end of *October*, you shal begin to plow over that ground againe which formerly you had Plowed, Hackt, Sanded, Limed and Manured ; and at this latter plowing you shal plow the ground somewhat deeper then you did before : and taking a good stich (as they call it in Husbandry) you shall be sure to raise up the quick earth, which had not been stirred up with the Plough before, making your furrowes greater and deeper than formerly they were, and laying them closer and rounder together then they were before ; and in this order or latter earing, you shal be careful to Plough your ground as clean as you can without baulks or other escapes in Husbandry, and as you thus plow your ground, you shal have certain Hackers, with their Hacks, to follow the Plough, and to cut the earth and furrowes into very smal peeces, as was formerly shewed in the hacking and cutting of the first arder ; then so soon as your ground is thus ploughed and hackt, you shal take a paire or two of very strong and good iron harrows, and with them you shal go over your ground, tearing that which was formerly ploughed and hackt into more smal peeces than before, and raising up the mould in much greater abundance than was formerly seen : which work once finished, you shal then take your Seed which would be the finest, cleaneft, and best Wheat you can provide, and after the manner of good Husbandry

Of sowing the
seed.

bandry, you shal sow it on the ground very plentifully, nor starving the ground for want of Seede (which were a tyrannous penny) nor yet choaking it with too much (which is as lavish a foolery) but giving it the full due, leave it to the earth and Gods blessing.

The second
Harrowing.

Now so soon as you have thus sown your seed, forthwith you shall take all the harrows again, harrowing the seed into the earth, and covering it close and well with all care and diligence; and in this latter harrowing, you shall have great respect to break every clot as much as you can, and so stirre up and make as much mould as you can, and the finer such mould is made, the better it is, so it cover deep and close; for you shall understand, that all these kinds of barren Clays are naturally tough, cold, and binding, whereby they stifle and choak any thing that growes within them; for the naturall toughnesse of the earth will not give any thing leave to sprout, or if it do sprout, the binding nature thereof so setters and locks it within the mould, that it cannot issue out; or if it do (with extreme struggling) rise through the pores of the same, yet doth the cold presently starve the root and make the stemme utterly unable to bring forth fruit, or any profit at all, so that if the toughnesse be not converted to a gentle loosenesse, and easie dividing of it self, the coldnesse unto warinthe, and the hard binling unto a soft liberty, there can be small hope of commodity, which this manner of dressing the earth bringeth to pass; for the mixture of the sand takes away the toughnesse, the Lime brings heat, and the manure comfort and liberty: as for the hacking and cutting the earth, that is to make all the rest symbolize and mixe together: for as if any by a Dispensatory make a Medicine, and mixt his ingredients confusedly one upon another, without care of mixture; melting or dissolution, shall find but a corrupt, disorderly, and ill compounded receipt; so he that dresseth and manureth his ground, and doth not by hacking, plowing, or some other husbandly course mixe the earth and the compost perfectly well together, shall seldom find profit from his seed or find any man of wit desirous to become his imitator. Now I must confesse, that some easie grounds of light and temperate nature, will mixe very well and sufficiently by the help of the Plough
only

Faults in the
Earth.

only ; but this barren hard earth of which I now write, must only be broken by this violent and extream labour, or else there will neither be mould, earth, or any converture for the Seed, but only foul, great and disorderly clots and lumps, through which the grain can never pass, and that which lyeth uncovered will be made a prey to fowl and other vermine which will hourly destroy it.

After you have sown and harrowed the ground you shall then see if there remain any clots or hard lumps of earth unbroken, which the teeth of the harrow are not able to tear in peeces (as it is very likely you shall perceive many) for these hard barren earths which are plowed up in their green swarths, are nothing near so easily broken and brought to mould, as are the mellow soft earths which have been formerly plowed many times before, because the hard and intricate roots of the Grasse, Mofs, and other quick substances growing upon the same doth bind and hold the mould so close and fast together, besides the natural strength and hardnesse of the earth, that without much industry and painfull labour, it is impossible to bring it to that finenesse of mould which Art and good Husbandry requireth ; therefore as soon as you behold those clots and lumps to lye undiscovered and unbroken, you shall forthwith take good strong clotting beetles, or maules made of hard and very sound wood according to the proportion of this figure.

Of clotting
the Earth.

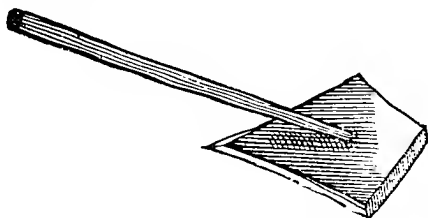


And with these maules or clotting beetles, you shall break all the hard clots and lumps of earth in pieces, even to so small dust as possibly you can, because you are to presuppose that these clots thus hard, tough, and unwilling to be with any means digested
into

into mould, are either not at all, or else very insufficiently mixed with the Sand, Lime, and other manures : and therefore you must rather break them that thereby they may mixe, and give easie passage to the Grain, and not like heavy paysses and dead lumps lye and press down the Seed so that it cannot sprout.

Another manner of Clotting.

But if it so fall out, partly by the hardnesse of the ill earth, partly through the season and drynesse of the yeer, that these clots and lumps of earth will either not be broken at all, or at least so insufficiently that the mould will not be any thing neerer so fine as you would have it ; you shall then, having done your best endeavour, let your ground rest till there have fallen a good round shower or two of rain : which may wet the clots through and through ; and then the next fair blast you shall take your clotting beetles, but not those which you took before in the dry season, but some much lighter, broader and flatter, being made of thick Ash-boards more than a foot square, and above two inches in thicknesse according to this figure.



And with these flat Maules and Beetles, you shall break all the unbroken clots and lumps of earth which shall trouble or annoy your ground, making your Lands as plain and smooth as is possible, so that the grain may have easie passage forth : which labour as soon as you have finished, you shall then refer the increase and prosperity thereof unto the mercies of God, who no doubt will give his blessings according to thy labour and thankfulness.

As touching the trimming and weeding of this Corn, as it is sprung a foot above the earth, or thereabout, you shall understand, that these hard barren grounds are very seldom troubled with weeds; for weeds, especial great, strong, and offensive weeds, are the issues of rich and fertile soiles; yet, if through the trimming and making of this earth (which is not commonly seen) you do perceive any store of thistles or other grosser weeds to spring up, you shall then in the month of *May*, with hooks, nippers and such like tooles, cut them away or pull them up by the rootes, which indeed is the better manner of weeding.

Now here is to be understood, that your ground being thus dressed and trimmed as is before shewed, you may very well for *Several Seeds* the two first years sow Wheat or Rye upon it, but Wheat is the greater profit and more certain seed; the third year bestowing but your fold of Sheep upon it, that is, manuring it with your sheep, (for it is to be intended that in these barren earths sheep are the greatest stock of which the Husbandman can boast) you may very well sow it with Barley, and have a fruitfull & plentiful crop thereon; the next three years, you may sow it with Oates; and the seventh year you may sow it with small white Garden Pease or Beanes, according as you shall find the strength and goodnesse of the ground, (for Beanes desire somewhat a richer soyle than the Pease;) then for three or four years following the seven, you may let it lye at rest for grass, and doubtlesse it will yeeld you either as good pasture, or as good Medow as you can reasonably require. And then after the expence of this time, it shall be good that you dresse & order your ground again in such sort as was formerly declared; and thus you may every year dresse one or other piece of ground, till you have gone over all your ground, or at least as much as you shall think expedient; and without faile, he that is Master of the most fruitfull and richest soyl, shall not boast of any greater increase then you shall, only your charge may be a little more, and so shall be also your commodity, which shall make an amends for your charge: as for your toyles, yours shall be much the lesse, by a just compensation; for though you have many labours; yet they are but Summer labours; and neither hurt your own body, nor your

Cattel; whereas the Master of the rich soyle is in continuall work both Winter and Summer, labouring twice so much to conserue the superfluous growth of weeds, as you do to beget the increase of Corn; and whereas he must ever keep a third or fourth part of his Corn ground without fruit, you shall not keep any which shall not yield you a sufficient commodity.

Objection. Now methinks I hear in this place to be objected uneome, that whereas I do prescribe the sanding of these barren earths with the salt Sea-sand and no other, (as it is true, for all other fresh sand is unavailable) what if the ground do lye so farre within the Land, that there is no salt sand within many score miles of it, how then shall I make good my barren earth? sure to fetch sand so farre will never equal the cost; or it may be this experience hath no further limits then to such hard and barren earths as lye alongst the Sea coast only.

Answer. To this I answer, that albeit this salt Sea-sand be of infinite good and necessary use, enriching grounds wonderfully much, yet is not this experience of bettering of barren soiles so strictly bound thereunto, but that without any use of the same, you may make your earth as fruitfull in Corn or Grasse, as hath been already formerly declared.

Ordering Earth where sands wanted. Therefore if your ground lye much within the Land, and farre from the Sea, so that this commodity of sand is not by any possible meanes to be gotten; then you shall (having first lookt into the nature of your ground, and finding it to be by all characters and faces a cold, barren, stiff, dry Clay, yeelding nothing but a short mossie grasse, without any other burthen at all as is seen upon most Plains, and Downs of this Kingdome) first plow it and hack it, as was before shewed in the former part of this Chapter, then in stead of sanding it, you shall lime it as aforesaid, or rather a little more plentifully, then you shall manure it, after (as at seed time) you shall plow it and hack it again, then harrow it as before said; then to every acre of ground you shall take two bushels of very dry bay-salt, and in such manner as you sow your wheat, you shall sow this salt upon the ground; then immediately after the sowing of the salt, you shall sow your Wheat, which wheat would be thus prepared before you sow it; the day before you are to sow your grain, you shall

Sowing of Salt.

shall take bay salt and water, and mixing them together make a brine so strong that it will bear an egge, then put the Wheate you are to sow into that brine, and let it steep therein till the next day, then drain it as clean as may be from the brine, and so sow, harrow it, clod it, and weed it, as was before declared, and no doubt but you shall find a marvellous great increase thereby, for this I can assure you, both from a most certain knowledge, and a most worthy Relation, that a Gentleman buying some store of seed-wheat, and inforst to bring it home by Sea, by some casuall meanes, some of the sacks at the unlading, fell into the Sea, and were much drench in the salt-water; whereat the Gentleman being grieved (as doubting some hurt to come to the seed) yet inforst of necessity to make use thereof, caused all the Wheat which was so wet to be sown by its self in a particular place, and upon the worst ground which he had, (as much despairing in the increase thereof) and it is most infallibly true, that of that wet seed, he received at least five fold more profit then of any other; and from thence it came, that this experiment of Brine & the sowing of salt hath taken place; from which the painfull Husbandman hath found such infinite increase to arise, that the use thereof will never be laid down in this Kingdome. Neither is the thing it selfe without good and strong probability of much increase and strength for the bettering of all manner of arable grounds; for there is nothing which killeth weeds, quicks, and other offences of the ground so much as saltnesse: for what makes your Pidgeons dung & your Pullens dung to be better for arable grounds, than any other dung or manure whatsoever, but by reason of the saltnesse thereof? by which saltnesse also, you may judge the strength and heat thereof, insomuch that the proper taste of fire, or any hot thing is ever salt; also we say in Philosophy, that blood which carrieth the vitall heat and warmth of the body is in taste salt, and so a nourisher, maintainer, and increaser of all the strength and vigour of the inward faculties; whereas Flegme, Choler, and Melancholly, which are the hurts and confounders of the vitall spirits, the first is in taste sweet, the second bitter, and the last of an earthly and dry taste, full of much loathsomenesse.

Now again you shall understand, that as you thus wet or steep
 Of steeping
 seed in brine.

steep your Wheat seed, so you may also steep any other Seed ; as barley, oats, beans, pease, lupins, Fitches, and such like ; of which you beans, pease, and lupins, you may steep more than any of the rest, and your Oats the least.

As touching Rye, it shall be good not to steep it at all, for it is a great enemy to all manner of wet and moisture, in so much, that the curious Husbandman will forbear to sow it in any shewre of raine, bearing in his minde this antient adage or saying. *that Rye will drown in the Hopper* ; as on the contrary part, *it heat would be sown so moist, that it might stick to the Hopper* : Yet notwithstanding, when you do sow Rye in any of these In-lands and cold barren Countries, where sand is not to be gotten, you shall not by any means omit the sowing of your salt before ; for it is nothing neer so moist as it is warm and comfortable.

CHAP. 3.

Of the ordering, Tilling, and dressing of all rough Barren Claves, whether simple or compound, being laden and over-run with Gorse, Broom, and such like.

NEXT unto these plain barren earths. which by reason of their heights, are subject in the Winter time to all manner of cold, frosts, stormes, tempest, blasts, and windes, which are the perfect hinderers of all increase and growth ; and in the Summer time to all hot scorplings, scaldings, and fiery reflections of the Sonne, which on the contrary part, burneth and withereth away that little seeming increase which appeareth above the earth ; I will place that barren clay, whether it be mixt or unmixt, which lying not so high, and being subject unto those hurts and offences, seemeth to be a little more fruitfull, yet either by the extream cold moisture thereof, or the stony hardnesse and other malignant qualities, is no lesse barren than that of which I have formerly written, which indeed is that barren and vile soyle, which will neither bear corn nor grasse, but is onely over-run and quite covered over

over with great, thick, and tall bushes of Gorse or Furies, which is a most sharp, woody, and grosse weed, so full of prickles, that neither Horse, Beast, Sheep, nor Goats, dare thrust their noses, to the ground to gather up that little poor grass, which groweth thereon. And albeit these Gorse or Furies are one way a little commodity to the needfull Husbandman, in being a reasonable good fuell, either for baking, brewing, or divers other sudden and necessary uses; yet in as much as the profit being compared with the great quantity of earth which they cover and destroy, and which with good Husbandry might be brought to great fruitfulness, it is indeed no profit at all: it shall not be amiss for every good Husbandman that is pester'd and over-laden with such ground, to seek by way of good Husbandry how to reduce and bring it to that perfection and excellency which may be best for his own particular commodity, and the generall good of the Kingdome wherein he liveth.

Then there is another kind of soile which is nothing at all differing from this, but is every way as barren and sterile, (which is as noysome a weed as the former) and though it have not such sharp prickles as the other, whereby to hinder the grazing of Cattell; yet doth it grow so close and thick together, and is naturally so poisonous and offensive to grasse, that you shall seldome see any grow where this Broom prospereth; besides, the bitterness thereof is so unpleasant and distastfull to all kind of Cattell, that not any will ever crop or bite upon the same: only it is of some necessary use for the poor Husbandman, in respect that it serveth him both for fuell, for thatching and the covering of his houses, (being for that purpose, of all, the longest lasting) and also for the making of Becfoms for cleansing of the house and barnes, or else for sale and commodity in the Market; all which profits (as before I said) being compared with the losse of the ground, and the goodness that might be reaped from the same, are indeed truly no profits but hindrances.

Therefore I would wish every man that is Master of such grounds, whether they be over-run with Gorse, Furies, Broom, or any such kind of grosse, woody, or substantial weed, first to cut

Destroying of Weeds. up the weed (of what sort soever it be, whether Gorse, Furs or Broom) as close and neer to the ground as you can possibly, and then making them up in sheaves or bigge faggots, carry them home, and stack them up very drye, so as no rain may enter or pierce into them, for the smallest wet will rot and consume them to dirt and filthinesse ; which done you shall make Labourers with hacks, picks, and such like tools, to stub up all the roots which you left in the ground, even to the very bottome of the same ; and these rootes you shall be very carefull to have stubbed up exceeding clean, by no meanes leaving (so near as you can) any part or parcell of the roots behind you ; then these roots thus stubbed up, you shal diligently gather together into little heaps as bigge as Moal-hills, and place them upon the ground a pretty distance one from another, and so let them lye till the Sun and wind have dryed them : for it is to be intended, that this labour must begin about the latter end of *April*, and beginning of *May*.

Burning of Baite.

Then so soon as you find these rootes are thorowly dryed, you shall pile them handsomely together, laying them a little hollow one from another, and then with a hack cut up some of the same earth, and therewithal cover all the rootes quite over, onely leaving a vent hole at the top, and on one side, and so let the hills rest two or three dayes, till the earth be a little parcht, and dried, then take fire and some other light dry fuel which is aptest to blaze, and with the same kindle every hill, not leaving them till you see them perfectly on fire ; which done let them burn both day and night, till the substance being wholly consumed, the fire go out of it own self, and this in some Countreies is called the *Burning of Baite*.

Breaking of the burnt earth.

Now as soon as the fire hath been extinguished for two or three dayes, you shal then come, and with shovels (and beetles to break the hard burnt earth in pieces) you shall spread all the ash clean over the ground ; which done, you shall with a very long plough tear up the earth into great and deep furrowes, and divide it into Land, as you shall think meet and convenient laying them higher and flatter, as you shall have occasion, and the ground lyeth more or lesse within the danger of water whether it be the over-flowing of some neere neighbourin
Brook

Brooks or Rivers ; or else other standing water occasioned by Raine and extraordinary Showres, which must be carefully lookt unto : because all over-flows and inundations of water is a mighty destroyer and consumer of grain ; but these barren grounds of which I now write, are very seldome oppress'd with water ; for most commonly they lye so high, that the continuall drynesse thereof is a strong occasion of the much unfruitfulness. After you have thus burnt your baite, and plowed up your ground, you shall then with your hacks hack it into small pieces, in such manner as was declar'd in the former Chapter ; then you shall (if the sea be any thing neer you) sand it with salt sand (as before said) then lime it, and after, manure it either with Ox-dung, Horse-dung, rotten Straw, mudde of Ponds and Ditches, the spiteling of House-floores, or sweeping of Channels and Streets, or such like; or for want of all these, in case you dwell neer unto the Sea-coast (where manure for the most part is in greatest scarcity, and the hardest to be come by) you shall gather from the bottome of the rocks (where the seyde of the Sea continually beareth) a certain black weed, which they call Hamp-weed, having great broad leaves, and growing in great abundance, in thick tufts, and hanging together like pease-straw ; and with these weeds you shall cover your lands all over of a pretty good thicknesse, and then forthwith you shall plow it again somewhat deeper, and with somewhat greater furrowes than before, raising up the new quick earth to intermingle, and mixe with those manures and helps which thou hast formerly prepared and laid upon the ground ; then you shall again hack it and harrow it ; then you shall take Pigeons dung, or Pullens dung (that is, any kind of land fowl whatsoever, but by no means any water fowle) or Pigeons dung and Pullens dung mixt together, and allowing to every acre two or three bushels thereof, which is the true quantity offred proportioned for the same, and this dung being broken and masht into small pieces you shall put into your Sylop or Hopper, and in the same manner as you sow your corn, you shall sow this dung upon the ground, and then immediately after it you shall sow your Wheat, either steeped in brine, or else salt Sea-water, or unsteeped : you shall think good, but in case you can neither get salt

Causes of unfruitfulness.

An Excellent Manure.

Of Plowing.

Of divers Manures.

And

Mixture of
Manures.

land nor Sea Rock-weeds, then you shall by no means omit the steeping of your Seed ; neither shall you fail before you sow your Seed, to mixe with your pigeons and pullens dung, a full equall part of Bay-salt well dryed and broke, and so sown with the dung upon the land, and then the seed after it ; which done, you shall harrow it again, clot it, sleight it, and smooth it, in such sort as was formerly declared in the former Chapter, for these labours have no alterations, but must in all points be done as was before set down.

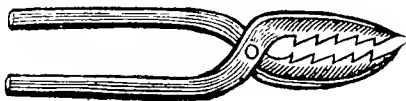
Of weeding.

Now touching the weeding of this earth, after the Corn be-
ginneth to grow about the ground, there is no fear to be had ei-
ther of Thistles, Tares, Cockles, Darnell, Docks, and such like
strong weeds, which indeed are the issues of good grounds ill
ordered and handled ; but the weeds which you shall most feare
in this place, is young Gorse, or Furrs, or else young brooms,
which are very apt to grow from the least part or parcell
of roots that shall be left behind ; Nay the very nature of those
barren earths is such, that of its own accord it will bring forth
those weeds: the cold sharpnesse of the air mixing with the sterili-
ty & roughnesse of the earth, being the cause that it will give life
to no other better plants ; therefore so soon as you shall behold
any of them to appear above the earth, though they be not half a
finger high, you shall presently with all diligence pull them
up by the rootes, and cast them away, or lay them in heaps that
they may be afterwards burnt, and the ashes sprinkled upon the
ground : and herein is to be observed, that the younger and the
sooner that you do pull up these weeds, the better it is, and the
easier they will come from the earth, and the sooner be destroy-
ed : for all those mixtures wherewith already you have been
taught to mixe your earth, are in themselves such naturall
enemies to all these kind of barren weed, that should you omit
the manual labour of destroying them (which no good husband
willingly will do) yet in time the earth of it self, and the often
plowing of the same would leave no such offence of weeds, or o-
ther growths which might hinder the corn.

Time for
Weeding.

Now touching the best time when to pull away these weeds
though generally it must be done as soon as they do appear
above the ground : yet it shall not be amisse for you to defer the
work

work till after a showre of rain, and then immediately after the ground is wet (and so by that means more apt and willing to open and forsake the root fastned within it) you shall with all diligence pull them out of the ground, and destroy them : neither shall you pull them out of the ground with your hands only ; for the Gorse have exceeding sharp prickes, so that with your naked hands you are not able to touch them, and to arme your hands against them, with strong thick gloves, would be too boisterous and combersome, so that sometimes you might either misse the weeds, and pull up the corne ; or else pull up the Corn and weeds both together ; therefore to prevent all these casualties or hinderances, you shall take a paire of long smal wooden Nippers, made after the forme of this figure.



And with these you shall pull the weeds out of the ground, and cast them into the furrows by the sides of the Land; till your dayes work be finished, and then with a rake you shall rake them together, and so lay them in heaps to drye and wither, in more convenient places; that when time shall serve, you may burn them, and use them, as was before declared.

Lastly, you shall have great respect, that if this ground be very much troubled with loose stones, as flint, pibble, and such like, that then you very carefully get them gathered from the ground, both before and after you have plowed it, and to lay them on heapes in other vacant places, where they may serve for pavings. and such like purposes when time requireth : but if the ground be over-run with great or else small Limestones, as for the most part these barren grounds are ; then shall you with all care gather them up, and lay them in great heapes in some corner of your field where you may make a convenient Lime kiln, and so there burn these stones thus gathered, which will be

Gathering of
stones.

both an infinite profit, and an infinite ease to the rest of your labours.

CHAP. IV.

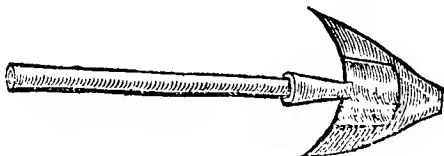
Of the ordering, Tilling, and Dressing of all rough barren Claves, whether simple or compound that are over-runne with Whinnes, and such like.

NEXT unto this barren Clay which is over-run with Furze, Broom, and such like, I will place that barren and unfer- tile earth, being also a Clay, whether simple or compound, which is over-run onely with Whinnes, and indeed bearing little or no other burthen, or if it doe bear any o her burthen as some little short mossie grasse; yet is that grasse so covered over with these sharp Whinnes, that not any best daie put his nose to the ground, or bite upon the same; and indeed this kind of earth is not any whit at all lesse barren than those of which I have already witten, but rather more, in that the meliorat- qualitis thereof are not so soon corrected, nor yet the vertus so soon restored.

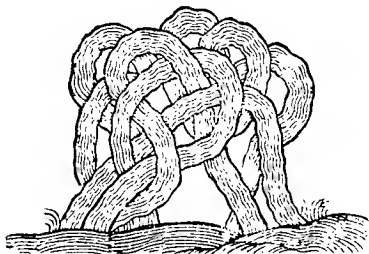
What whinnes
are.

Whinnes are a certain kind of rough dry weeds, which grow bushie and thick together, very short and close unto the ground, being of a dark brown colour, and of crooked growth, thick and confused, and full of knots, and those knots armed with hard, long sharp pricks like thorns or bryars, they have little brown leaves which shaddow the pricks, and do wind their branches so one into another, that they can hardly be separated, yet is not their growth at any time little more than a handfull above the earth, only they spread exceedingly, and will runne and cover over a whole field, choking up all sorts of good plants whatsoever, and turning the best grasse that is, to mosse and filthinesse: where- fore if at any time you be Master of any such naughty and bar- ren ground, and would have it reduced unto goodnesse and fer- tility, you shall first take a fine thinne paring shovel made of the best iron, and well steeled, and hardened round about the edges, ac- cording to the form of this figure following.

And



And with this paring-shovel, you shal first pare up all the upper swarth of the ground, about two in ches, or an inch and a halfe thick at the least, and every paring would be some three foot in length at the least, and so broad as the shovell will conveniently give it leave, and this swarth thus pared up, you shall first turne the Whinny or grasse side downward, and the earth side upward, and so let it lye two or three dayes in the Sunne to drye (for this worke is intended to begin in the month of *May*) and when that side is well dried, you shall turn the other side, and drye it also, then when all the swarth is dried, you shall gather six or seven peeces together, and turning the Whinny or Grasse-side inward, and the earth side outward, you shall make round hollow little hils thereof, much according to the fashion of this Figure following.



And the inward hollownesse: like unto the hollownesse of an *Oven*, but much lesse in compasse; which done, you shall fill the hollownesse with drye chips, or small sticks or Furse and Scraw mixed

nixed together, which you shall put in at the vent-hole which shall be left on one side of the hill, and kindling it with fire you shall burn all that swarth in such sort as you burnt the roots of your Furse and broom before ; for this is also called a burning of bair, as well as the former ; for it is a most principal nourisher of the earth, and a very sudden destroyer of all malignant weeds whatsoever.

Breaking of
Baies.

After the burning of your hills, as soon as the fire is utterly quenched and gone out, and no heat at all left in the hills ; you shall then with clotting beetles beat them all down to dust, and then with shovels you shall spread the ashes quite over all the ground, as was before declared in the former Chapter : and herein is to be noted, that you must place these hills as thick and close together as by any means possibly you can ; making your hills so much the lesse and lower, that they may stand thicker and nearer together, and so cover more ground, and thereby the heat and strength of the fire to disperse it self over all that peece of ground : for the fire burning upon the earth, doth as much good for the enriching of the earth, and destroying of the weeds, as the ashes doth which are spread upon the same.

Plowing.

Now after your baite is in this manner burned and spread, you shall then (as was before shewed) plow up your ground in good large furrowes, then hack it very small, Sand it, Lime it, and manure it ; and of all manures, there is not any better for this ground than Oxe-dung, and ashes well mixt together ; of which ashes, those of bean straw, Pease-steaw or any other straw are best ; and those of Wood ; or Fern next, & those of Sea coal or Pit coal are the worst of all. Swines dung is not much amisse for this ground, for though it be a great breeder of weeds and thistles in good and fertile grounds, yet in this cold hard and barren earth it worketh no such effect, but is a great comforter and warme moyster of the same.

After you have thus made your ground ; as soone as Wheat seed-time commeth, which is the latter end of *September* and beginning of *October*, you shall then with great care plow over your ground again, and take great respect that you turn up your furrows much deeper than before, and that for two speciall causes ;

causes; the first, that the new earth may the better be mixt with the old earth, and those helps that are added thereunto; and secondly, that you may be sure to tear up the roots of all the Whinns from the very bottome of the earth, not suffering any part of them to remain behind, and for this purpose it shall not be amisse to have an idle boy or two to follow your plow and to gather away all the rootes that shall be torn up, or any way else left bare above ground, which rootes shall be laid on heaps in convenient places, and then after burnt, and the ashes thereof spread upon the ground: which will be a very great comfort unto the seed, being a speedy help unto the sprouting thereof, and a very warm comforter of the root after the stemme is spindled above ground, for in these cold barren earths nothing doth so much spoyl and slay corn, as the dead coldnesse which lyeth at the root thereof; for in many of these unfertill places, you shall see Corn at the first sowing (whilst there is a little strength in the ground) sprout in great abundance, promising much hope of the profit: but when it should spindle and come to much better perfection, that poor strength being spent and consumed, and the cold and drynesse of the soyl, having as it were overcome all matter of comfort, then presently you shall see the blade of the Corn turn yellow, the stemme or stalk to wither, and either put forth no ear at all, or else a very poor little empty one, being laden with nothing but a moist dry chaffe huske without substance. But to come again to our purpose, after you have thus plowed up your ground the second time, you shall then hack it again, and harrow it, as was declared in the former Chapters; then you shall take your seed-wheat which hath been steeped either in brine or Sea-water, and to every bushel of that seed you shall adde a bushel of bay-salt, and mixe them very well together in your Hopper or Sydlop, and so sow them together upon the ground, observing to double your cast so oft, that you may not fail to cast that true quantity of seed into the earth which otherwise you would have done if so be there had been no mixture at all, for to do otherwise were to deceive the ground, and a handfull of seed so saved would be the losse of a peck in the time of Harvest; therefore have great respect that your ground have his due; for it is no

more cost, though it be a little labour.

Harrowing. When your seed is sown. you shall harrow it again the second time, clot, smooth it, and sleight it, as was before declared in the former Chapters.

Weeding. As touching the weeding of this ground, it is the least labour of all other, for the earth being so corrected as is before shewed, it wil naturally of it selfe put forth no weeds, especially if you remember to plough it deep, and be sure to tear up and gather away all the quick rootes; otherwise if that labour be any thing neglected, then wil it put forth both Whins and great store of other rough weeds, which as soon as you shal perceive to appear, you shall presently with your wooden nippers pull them up by the roots, as was at large declared in the foregoing Chapter.

Profits. Now for the general profit of this ground thus made and prepared, it is the same that the two former are, that is to say, it wil bear you good and sufficient Wheat, in plentiful abundance for the space of two or three years; then barley, a year after; then Oats three years together after the barley; and pease or beans a year after the oats; then Lastly, very good Meadow or Pasture, for the space of three or four yeares after, and then you shall begin and dresse it again, as was formerly declared.

CHAP. V.

Of the ordering, Tilling, and Dresseing of all barren Clayes, whether simple or compound, which are over-run with Ling or Heath,

THere followeth now successively another sort of barren earth, which indeed is much more sterile and barren then any of the other formerly written upon: because they, out of their own nature, doe beare a certain kind of grasse or food which will relieve ordinary hard store-Cattell, whether it be Sheep, Goats, or young beasts; But this earth, of which I am now to entreat, beareth no grasse at all, but onely a vile filthy black brown weed, which we call Ling or Heath, the tender tops whereof Cattell and wild Deer will sometimes crop, yet it isto them but little relief, and only maintaineth life and no more.

Now

Now albeit some may object unto me. that this kind of soyle is ever a sandy soyle and no clay, as may be seen in most Chases, Forrests, and Downs : yet I answer, that albeit it hold so in general ; yet there are divers clays, especially in mountainous Countries, that are pestered with these kind of weeds, as may be seen in the North, and North-west part of *Devonshire*, in the parts of *Cornwall*, and in many parts both of North and South *Wales* ; and these clay grounds which are thus offended with these weeds of Ling or Heath, are much more barren and unfruitful than the Sands, because of th. ir much more coldnesse ; yet these clays which are mixed with either black Sand, dun Sand or yellow Sand, and over runne thus with Heath or Ling, are the most barren of all. To make any farther description of this Heath or Ling, being a thing so notoriously known over all this Kingdome, I hold it meerly needlesse, only to say it is a rough brown weed, shooting out abundance of stalkes from the root, with little dark leaves and flowers on the top, of a pale reddish colour, much inclining unto Peach colour at the first : but being full blown, they are then a little more whitt.

You therefore that have any such ground, and desire to bring it to fruitfulness, and the bearing of good Corn and Grasse in a reasonable abundance, you shall first with sythes or sharpe hooks (but old sythes are the better) cut down all the Heath, or Ling, which groweth upon the earth you intend to convert to husbandry. So mow the ground as possibly you can ; then when it is cut down (which would ever be at the beginning of the Month of *May*) you shall let it lye upon the ground, dayly tossing and turning it till it become very drye, then spreading it all over the ground, and mixing or covering it with drye straw of any kind whatsoever, you shall presently set it on fire in so many several corners of the field that all the several fires in the end may meet in one poynt, and not leave any part of the mowen Heath or Ling unburnt, or any part of the ground unscorched ; After this is done, and the ground cooled, you shall with your drabbing beetles beat the ashes hard into the ground, then you shall take a strong plow, with a broad winged share and an iron coulter, and you shall plow up all this ground thus burnt in

Another burning of Baite.

in very large and deep furrowes by no meanes picking out any of the quick roots which shall remain in the furrows so turned up, but letting them rest in the earth still; then with your hake, and the help of your iron paring shovel, you shall cut up the furrows, formerly turned up, into short pieces of three foot, or three foot and a half long, and some lesse as occasion shall serve: then with these pieces, you shall build little hollow hills, such as in the former Chapter you made of the upper swarth of the ground only; and then filling the hollownesse with drye heath, and drye straw mixt together, you shall set every hill on fire, and so burn the very substance of the earth into ashes, which will soon be done by reason of the infinite number of roots and small strings, which lye mixt in the earth, and the drynesse thereof occasioned by the former burning: And this is another kind of burning of baite, much differing from all the former, and yet to as great end and profit as any whatsoever; and these hills must, as the former, be placed one as neer another as is possible, so as they may spread and cover over the greatest part of the ground, and leaving no more than a good reasonable path to passe between hill and hill.

Now as soon as you have burned all your baite, and that your hills are cold, you shall then as was before shewed in the former Chapters, with beetles and shovels break down the hills, and spread the earth and ashes over all the ground; which done, you shall sand it (if the situation of the ground be answerable thereunto) and lime it in such sort as was shewed in the second Chapter; then when it is limed, and the lime equally spread, not more in one place than in another, you shall then manure it with the best manure you can provide, of which there is none better or more proper for the ground than mans ordure, and the rubbish, sweepings, parings, and spitlings of houses mixt together: for want of this (because it may not be in so great plenty as other manures) you may take either old Oxe dung, or Horse dung, or for want of them the old rotten and muddy saddles or bottomes of Corn stacks of Reeds, especially Pease-stacks, or Bean stacks; provided that it be thoroughly rotten; for the lesse rotten it is, the worse it is. Also the scowings of common Sewers, and especially those
through

through which much of mans urine doth passe is a most wonderfull and beneficial manure for these grounds, so are also the scowring of sinks and channels, which come from Kitchens and wash-houses, where great store of brine and salt broath is shed, & other greasie, fat, and purrified substances, as also abundance of sope suds, and buck-ashes, and other sope and lee-washings, than which there is no better manure that can be used for these kind of grounds.

After your ground is thus perfectly made and manured, and that Wheat seed time doth draw on, which (as before was shewed) is ever at the latter end of *September*, you shall then plow up your ground again in that manner as was shewed for the former earth, to wit, much deeper than before : for you are to understand that this ground being drest as is before declared, there will remain nothing of the furrows which were first plowed up but the ashes, which being covered with sand, lime, and manure, the earth will lye plain and level, so that of necessity you must raise up new furrows of new earth, which being done, you shall then with your hacks, cut all the new earth into very small pieces, mixing them well with the other mould made of sand, lime, manure and ashes then as was before said, you shall harrow it to make the mixture so much the better, and the mould so much the finer ; and then if it have been sanded, you may sow your seed-wheat simply of it self, without any doubt of the plentifull increase thereof ; but if it have not been sanded then as in the foregoing Chapter, you shall not onely steep your Seed in brine (as before shewed) but also you shall mixe your Seed with Bay salt, and so sow it into the ground ; or if at the time of sowing (after it is plowed, hackt, and harrowed) you bestow either Pigeons dung, or Pullens dung, or Sheeps dung upon the land, it will be much better, and the corn will give a much greater increase. Now as soon as your land is sown, you shall then forthwith harrow it again, and cover the seed very close ; then you shall clot it, smooth it, and sleight it (as was before shewed.)

As touching the weeding and cleansing of this earth after the Corn is sprung up, you shall understand that there is great care to be had therunto, for this ground is much subject unto weeds,

Weeding.

and those of the worst kind : for although for the most part it will be free from all manner of soft and tender weeds, as thistles cockle, darnel, ketlocks, docks, rape, and such like herball stuffe, yet it is much subject to twitch bryars, which grow at both ends, Ling, Wild-time, and such like, any of which as soon as you shall see to appear, or peep above the earth, you shall presently with your Nippers pull them up by the rootes, and not suffer them in any wise to look a handfull above the ground ; for if you do, their hardnesse is so great, and their roots so large & fast fixt into the mould, that you can by no means pull them away without great losse and hurt to the grain, pulling up with them all such roots of Corn, as shall be fixed near about them : for any other weak and superfluous things which shall grow from the Land, you may with ordinary weeding hooks cutt them away; as for long grasse, whether it be soft or sedge, or any other such like stuffe, you shall not stirre it, but let it grow : for it keepeth warm the roots of your Corn, and giveth nourishment and increase thereunto. Now for the profit of this soyl thus ordered and husbanded, it is equall with any of the former, and will bear Wheat very plentifully for the space of the three first years ; good Barley the fourth year, with the help of the sheep fold (as was before said) and good Oats the fifth, sixth and seventh years ; and very good small Pease, the eighth year (for beans this soyl will very hardly bear at all) & the ninth, tenth, and eleven year it will bear very good meadow (though not altogether very fine pure grasse, yet very good feeding & wholesome grasse) or so good pasture as a man can reasonably require for any holding Cattell whatsoever ; nay, it will also indifferently well feed, and fat Cattell, though peradventure it requireth a little longer time than other finer ground will.

C H A P. 6.

Of the ordering, Tilling and Dressing, of all plain simple barren Sands, bearing nothing but a short mossie grasse.

HAVING thus (in as large manner as I hope shall be needfull for any judicious or indifferent Reader) written of the natures, Orderings, Plowings, and Dressings, of all manner of barren

ren and unfruitfull Clayes, whether they be simple of themselves, or else compounded with other earths, as Sands, Chalks, gravels, and such like; shewing by those naturall burthens which continually of their own accord they do produce (which indeed is the easiest and safest way of knowledge) how to amend and better them, and bring them to that perfection of fruitfulness that the best earth shall but in a very small degree exceed them, nay, hardly any thing at all, except in the saving of a little charge and some labour, without which nothing is to be obtained by the Husbandman ; neither is this charge or labour thus bestowed on these barren grounds to be grutcht at by any honest mind ; since the worst crop of tenne or eleven, will make good his charge and toyle with a reasonable interest ; so that I make account, nine or tenne years profits come into his barnes without purchase, for it is to be intended that all these earths formerly spoken of, are not to be drest, or to put the Husbandman to any charge more than the first year of tenne or eleven for the second year he shall as soon as he hath gathered his Wheat off, which will be in *August*, and finish other parts of his Haruest, presently put his Plow into the same Wheat-ground again, and plow it up, hack it, and hartow it, sow it, harrow it again, clod it, and weed it, as in the former year, and so consequently of all the rest of the years following, whereby you perceive that all labours and charges are saved more than once plowing and sowing.

This then considered, it necessarily now followeth that I speak of the bettering, and bringing, into perfection, of all manner of barren sand grounds, being simply of themselves, without any mixture of other earths, except one and the same kind, as sand with sand, though peradventure the colours of the sands may alter: as red with white, yellow with black, &c. which in as much as the whole substance is sand without any contrary mixture, there it may well be called simple and not compound ; and of these sands, I purpose to intreat, as formerly I did of the clayes ; that is to say, by their outward faces and Characters, which are those burthens and increases, which of their own proper nature without any help or compulsion of any others, they produce and bring for into the World.

Plowing.

And first of that naughty cold and barren sand which lying upon high, stony, and mountainous Rocky places, or else upon lower cold bleak Plaines. subject to the North, and North-East winds and tempests, or bordering upon the Seas, doth not bring forth any thing but a short mossie grasse, which the Sun maketh bitter, and the cold dews fulsome and unsavory in tast. If any man then be master of such unprofitable and unfruitfull earth, and desire to have it brought to goodnesse, and perfection, you shall first, at the beginning of the spring, as about middle *April* or earlier, with a strong Plow answerable to the soyle, yet somewhat lesse, both in timbers, and irons, then that wherewith you plow your Clay ground, plow so much of that earth up as you may conveniently compass, to sow and dresse exactly, & perfectly for to undertake more, were to make all unprofitable, and to cast away much labour and charge, without any profit. This ground you shall plough of an indifferent depth, though not so deep as the Clays, you shall lay the furrows though flat, yet close one to another, without leaving any bulke between, but ploughing all very clean, yet not so very clean and close together, that you may lay the green swarth, to the new ploughed or quick earth; but rather turn one swarth against another, so as the furrows may lye, and no more but touch the edges one of another: This when you have done, you shall then with your hacks, cut and break all the earth so turned up into very small peeces, and not only the earth so turned up into very small peeces; but also other green swarth which was left unplowed; provided that before this labour of hacking, you let the ground lye certain dayes in the furrows, that one swarth heating and scolding the other, they may both equally rot and grow mellow together: which once perceived by the blacknesse thereof, you may then at your pleasure hack it, and cut it; as is before declared.

Objection.

Now some may in this place object unto me, that this labour of hacking should be needlesse, in as much as all sand grounds whatsoever are out of their own nature so light, loose, and willing to dissolve, that this toyl might very well and to good purpose be saved.

Answer.

To this I answer, that true it is, most sands in their own nature

tures are loose, and light, and willing to dissever into fine mould without any extremity, especially rich and fruitfull sands whose predominant Quality of warmth, giveth nourishment and increase : but these barren and cold sands, in which is a certain singular toughnesse, and most unwholsome drynesse, are of a clean contrary nature, and through the stony hardnesse thereof, they are as unapt to break and dissever, as any Clay whatsoever : besides, the swarth being of a tough massie substance (which ever carrieth a hard strong root answerable with the cold in which it is ingendred) doth so constantly bind, fetter, and hold the mould together, that it is impossible for any harrow to break it in peeces, or to gather from it so much mould as may serve to cover the Corn and give it root when it is sown into the same : and therefore this work of hacking is necessary.

When therefore you have thus hackt your land and distributed the mould into many small peeces, you shall then with all expedition Marle it; which forasmuch as it is no generall nor common practise in every part of this Kingdome, I will first tell you what Marle is, and then how to find it, digge it, and use it for your best behoof.

Marl, you shall then understand, is (according to the definition of Master Bernard Palissy) a natural, and yet an excellent Addition. being an enemy to all the weeds that spring up of themselves, and giving a generative vertue to all seeds that are sown upon the ground : or (for the plain husbandmans understanding) it is a certain rich, stiffe, and tough clay, of a glewie substance, and consisteth only, as some suppose. This Marl is in quality cold and dry and not hot (as some would have it) and it was earth before it came to be Mude, and being made Maile yet it is but a Clay ground all Chalk whatsoever was Marl before it was Chalk, and all manner of stones which are subject unto Calcination or burning, as Lim. stone, Flint or the like, were first Marl before they were stones, and only hardened by accident and so not possible to be dissolved but by the fire : as for Maile it self, when it is a little hardened, it is onely dissolved by frosts and nothing else, and thence is the cause that Marl ever worketh better effect the second year than the first.

This Maile hath been made so precious by some writers, that

it hath been accounted a fift element, but of this curiosity I will not now difpute.

Touching the complexions or Colours of Marle, there is fome difference ; for though all conclude there are four feveral colours in Marle, yet one faith, there is a White, a Gray, or Rufet, a Black and Yellow ; another faith, there is a Gray, a Blew, a Yellow, and a Red ; and a third faith there is a Red, and White, mixt like unto Porphery. And all thefe may well be reconciled, and the colours may alter according to the climate and ftrengh of the Sun : So that by thefe Characters, the colour, the toughneffe, and the loofeneffe when it is dryed, any man of judgment may eafily know Marl, from any other earth whatfoever. This Marle is fo rich in it felf, and fo excellent for continuance, that it will maintain and enrich barren grounds, the worft for tenne years, fome for a dozen, and fome for thirty years ; yet there is a great refpect to be had in laying of this Marl upon the ground, that is to fay, that you lay it neither too thick nor too thinne, that you give it neither too much, nor too little ; for any of thefe extremities are hurtfull ; and therefore hold a mean, and fee there be an indifferent mixture between the Marle and the earth, on which it is laid.

For the generall finding out of this Marle, there is no better way for readineffe, and the faving of charges, than by a great Augure or wimble of Iron, made to receive many bits one longer than another, and fo wrefting one after another into the ground to draw out the earth, till you find you are come to the Marle, which perceived, and an affay taken, you may then digge at your pleasure.

Now for the places moft likely where to find this Marle, it is commonly found in the loweft parts of high Countries, near Lakes and fmall Brooks. and in the high parts of low Countries, upon the knols of fmall hills, or within the Clifts of high Mountainous banks, which bound great Rivers in : to conclude, you fhall feldome find any of thefe barren fands but they are either verged about with Marle grounds, or if you will beftow the labour to digge below their fand, you fhall not fail to find either Marl, or fome quarry of ftone or both ; for in fome places Marle lyeth very deep, in other fome places within

a spades graft of the upper swarth of the earth : therefore it shall be good for you to make proof of all the most likely parts of your ground to find out this Marle ; and as soon as you have found it out, you shall with Mattocks and Spades digge it up and carry it to your land, there laying it in bigge round heaps ; and setting them within a yard or two one of another ; thus when you have filled over all your ground (which would be done with as great speed as might be, for the antient custome of this Kingdome was, when any man went about to Marle his ground, all his Tenants, Neighbours and Friends, would come and help him to hasten on the work) you shall then spread all these heaps, and mixing the clay well with the sand, you shall by all smooth and level together ; and herein is to be observed, that if the land you thus Marle shall lye against the side of any great Hill or Mountain, whereby there will be much descent in the ground ; then you shall (by all means) lay double as much Marle, Sand, or other compost on the top of the Hill as on the bottome, because the rain and showers which shall fall, will ever wash the fatnesse of the earth down to the lowest parts thereof.

Now in the laying of your Marle, you are to hold this observation, that if you lay it on hard and binding grounds, then you are to lay it in the beginning of Winter : but if on grounds of contrary nature, then it must be laid in the Spring or Summer. Again, you shall observe, that if you cannot get any perfect and rich Marle, if then you can get of that earth which is called Fullers earth, and where the one is not, commonly ever the other is, then you may use it in the same manner as you should Marl, and it is found to be very neer as profitable.

When your ground is thus marled (if you be neer to the Additions : sea-side) you shall then also sand it with salt sea-sand, in such Observations, soe as was formerly declared, onely you may forbear to lay altogether so much upon this sand ground as you did on the Clay ground, because an half part is fully sufficient. If you cannot come by this salt-sand, then instead thereof, you shall take Of Chalk and chalk, if any be to be had neer you, and that you may lay in the more plentifull manner than the sand ; and albeit it is said, that

that Chalk is a wearier out of the ground, and maketh a rich soyle, yet a poor soyl; in this soyle it doth not so hold, for as it fretteth and wasteth away the goodnesse that is in Clay grounds, so it comforteth and much strengtheneth the sand-earths: and this Chalk you shall lay in the same manner as you did your Marle, and in the same manner spread it and level it; which done, you shall then Lime it, as was before shewed in the Clay grounds: yet not so abundantly, because also a half part will be sufficient; after your Liming, you shall then manure it with the best manure that you have, whether it be dung of Cattel, Horse, Sheep, Goats, Straw, or other rubbish; and that being done, and seed time draweth on, you shall then plow up your ground again, mixing the new quick earth and the former soyles so well together, that there may be little distinction between them: then you shall hack & againe, then harrow it, and lastly sow it with good, sound, and perfect seed: and of seeds, though Wheat will very well grow upon this earth, yet Rye is the more naturall and certain in the increase: yet according to the strength of the ground, you may use your discretion, observing that if you sow Wheat, then to steep it before in brine or salt sea-water, as was before described; but if you sow Rye, then you shall sow it simply without any help, except it be Pigeons-dung, or Bay-salt simply of it self, in such manner as hath been before declared either sowing the salt with the Corn, or before the Corn, as shall seem best in your own discretion.

After your seed is sown, you shall then harrow it again, dett it, smooth it, and sleight it, as before is shewed in the second Chapter, which done (after the Corn is shot above the earth) you shall then look to the weeding of it, being somewhat a little too much subject to certain particular weeds, as are Hare-bottles, wild Chesse bolles, Gypsie-flowrs, and such like, any of which, when you see them spring up, you shall immediately cut them away close by the roots; as for tearing their roots out of the ground with your Nippers, it is not much materiall for the cutting of them is sufficient, and they will hardly ever again grow to do you any hindrance; many other weeds there may grow amongst these, which are also to be cut away, but these are the principal, and of most note; whereof as soon as you have clean-
sed

sed your lands of these and the rest, you shall then refer the further increase of your profit unto Gods providence.

Lastly, you shall understand that this ground being thus plowed drest and ordered will without any more dressing, but once plowing and sowing, every year bear you good Wheat or good Rye three yeares together; then good Barley the fourth year; good Oats, the fifth sixth and seventh years; excellent good Lugging the eighth year, and very good Meadow or Pasture three or four years after, and then it shall be necessary to drest it again in such manner as was before described.

CHAP. 7.

Of the Plowing, Tillage, Ordering, and Inriching of all Barren Sand, which be laden and over-runne with Braken, Fern, or Heath.

NEXT unto this plain, cold, barren Sand, which beareth no other barren but a short meslie grasse, I will place that Sand which is laden and over-runne with Braken, Fern, or Heath, as being by many degrees more barren than the former, both in respect that it is more loose and less substantiall, as also in that it is more dry and harsh and altogether without nutriment, more than an extreme sterile coldesse, as appeareth by the burthen it bringeth forth, which is Braken or Fern, a hard, rough, tough weed, good for nothing but to burn, or else to litter fire beasts withall, for the breeding of manure; or if you strow it in the high wayes where many travellers passe, it will also there turn to good reasonable compost.

Of this kind of ground if you be master and would reduce it unto fertility and goodnesse, you shall first, whether the braken be tall and high (as I have seen some as high as a man on horse-back) or short, and low (and indeed most commonly these barren earths are, for tall Fern or Braken shewes some strength in the ground) you shall with scythes first mow it down in the month of May, then whither it and dry it up on the ground, and after spread it as thinne as you can over all the earth you intend to plow; which done, you shall bring your plow and begin to plow the ground after this order: first you shall turn up your furrow,

and lay it flat to the ground, green-swarth, against green-swarth, then look how broad your furrow is so turned up ; or the ground so covered , and just so much ground you shall leave unplowed between furrow and furrow, so that your land may lye a furrow and a green balk, till you have gone over all the ground ; then you shall take a paring-shovel of Iron, and pare up the green swarth of all the balks between the furrows at least two inches thick, and into pieces of two or three foot long and with these peeces of earth, and the dry Fern which is pared up with them, you shall make little round hollow baire hills as in the third or fourth Chapters ; and these hills shall be set thick and close over all the ground, and so set it on fire and burn it ; then when the fire is extinct, and the hills cold, you shall first with your hicks cut in peeces, all the furrowes that were formerly turned up, and then break down the burnt hills, and mixe the ashes and earth with the other mould very well together ; which done you shall then with all speed marl this earth as sufficiently as possibly may be, not scenting it of Marle, but bestowing it very plentifull upon the same ; which done, you shall then plough it over again, and plowing it exceeding well, not leaving any ground whatsoever intorn up with the plow; for you shall understund that the reason of leaving the former balks was, that at this second plowing after the Marle was spread upon the ground, the new, quick, and unstirred fresh earth might as well be stirred up to mixe with the Marle, as the other dead earth and ashes formerly received, whereby a fresh comfort should be brought to the ground, and an equal mixture without too much drynesse, and this second Ardor or plowing would begin about the latter end of *June*.

Of Marle.

Sanding and
Liming.

After your ground hath been thus marled, and the second time plowed, you shall then sand it with salt Sea-sand, Lime it, and manure it, as was declared in the foregoing Chapter: and of all manures for this soyl ; there is not any so exceeding good as sheeps manure, which although of the Husband-man it be esteemed a manure but of one year, yet by experience in this ground it hapneth otherwise, and is as durable, and as long lasting a compost as any that can be used, and besides it is a great destroyer of thistles, to which this ground is very much subject, be-
cause.

cause upon the alteration of the ground the Fern is also naturally apt to alter unto thistle, as we daily see.

When your ground is thus dress'd and well ordered, and the ^{Plowing and} Seal-time cometh on, you shall then plough it again in such ^{Sowing.} manner as you did the second time, that is to say very deep, deep, and after the manner of good Husbandry, without any rest, balks or other disorders. then shall you hack it very well, then harrow it, and then sow it but, by mine advice, in any case, I would not have you to bestow any Wheat upon this soyl, (except it be two or three bushels on the best part thereof, for experience sake, or provision for your household) for it is a great enemy unto Wheat, and more than the marle: it hath no nourishment in it for the same, because all that cometh from the salt Sand, Lime, and Manure, is little enough to take away the natural fertility of the earth it selfe. and give it strength to bear Rye, which it will do very plentifully; and therefore I would wish you for the first three yeares only to sow the best Rye you can get into this ground; the fourth yeare, to sow barley; the fifth, sixth and seventh, Oats; and of Oats, the bigge black Oate is the best for this ground, maketh the best and kindest Oat-meal, and feedeth Horse or Cattel the soundest: as also it is of the hardest constitution, and endureth either cold or drynesse much better than the white Oat, the cut Oat, or any Oate whatsoever; the 8th yeare, you shall only sow Lupins, or Fitches; and three yeares after you shall let it lye for Grass, and then dresse it again as before said; for it is to be understood, that in all the following yeares, after the first yeare, you shall bestow no labour upon this ground, more than plowing, sowing, hacking, and harrowing at seed time only.

But to proceed to the orderly labour of this ground, after you have sown your Rye, you shall then harrow it again, clot it, smooth it, and sleight it, as was before shewed in the second Chapter of this booke. And although a man would imagine that the sandy looseness of this soyl, would not need much clotting, or sleighting of the Earth, yet by reason of the mixture thereof with the Marle and Manure, it will so hold and cleave together, that it will ask good strong labour to loosen it and lay it so hollow and smooth, as in right it should be.

Labours after
Sowing.

Weeding.

Touching the weeds which are most subject to this soyl, they are Thistles, and young Brakes, or Ferns which will grow up within the Corn, which before, they rise so high as the Corn, and even as it were at the first appearing, you must with your wooden Nippers pull up by the roots, and after take up and lay in some convenient place where they may wither and rot, and so turn to good manure.

C H A P. 8.

Of the Plowing, Tilling, Ordering, and Enriching of all barren Sands which are laden and over-run with Twitch or Wild Bryar.

Destroying of
Twitch and
Bryar.

HAVING written sufficiently of this hard and barren, wast, wild, sandy ground, which is over-run with braken, Fern, Heath and such like. I will now proceed, and unto it joyn another sand which is much more barren, and that is the sand that bringeth forth nothing but wild Twitch, Bryars, Thorn-bush, and such like under-growth, of young mistliking wood, which never would rise or come to profit, the bitter cold drines of the earth wherein it groweth, and the sharp stormes to which the climate is continually subject both day and night, blasting it in such manner that nothing appeareth but starved, withered, and utterly unprofitable burthens good for nothing but the fire, and that in a very simple sort. Such grounds if you be Master of, and would reduce it to profit and fruitfulness, you shall first with hooks, or axes, cut up the upper growth thereof, that is, the bushes, young Trees, and such like; then you shall also stub up the Roots, not leaving any part of them behind in the earth, carrying away both home to your house to be employed either for fuel, or the mending of the hedges, or such like, as you shall have occasion; this done you shall take a pair of strong iron harrowes, and with them you shall harrow over all the earth, tearing up all the Twitch, Bryars, and rough grasse by the roots, that not any part but the bare earth may be seen, and when your harrowes are cloyed, you shall unlade them in severall places of the ground, laying all such rubbish of weeds and other stuff which the harrowes shall gather up in a little round

round hill, close up together that they may sweat, wither and dry; then spreading them abroad and mixing them well with dry straw, burn them all over the ground, leaving no part of the weeds or graze unconsumed; then without beating in of the ashes, you shall presently plow the ground all over very clean away be, laying the furrows as close as you can one to another and leaving no earth untouched or untorn up with the plough, which done, you shall immediately hack it into small peeces, and as you hack it, you shall have idle boyes to go by the hackings, to gather away all the rootes which they shall lousen or break from the mould, and laying them on heaps in the worst part of the ground, they shall there burn them, & spread the ashes there after your ground is thus harrowed, plowed and hacked, you shall then muck it, as was formerly shewed in the sixt Chapter; then shall you sand it, lime it, and manure it as before said.

Now of Manures which are most proper for this soyle, you shall understand that either Ox, or Horie manure, rotten-straw, or the scowring of Yards is very good, provided that with any of these manures, or all these manures, you mixe the broad-leaved weeds, and other green weeds, which do grow in Ditches, Brooks, Ponds, or Lakes, under Willow-trees, which with an Iron Rake, Drag, or such like instrument, you may easily draw upon the banks, and so carry it to your Land, and there mingle it with the other manure, and so let it rot in the ground; this manure thus mixed is of all other most excellent for this soyle, both by the experience of the Antients who have left it unto memory, as also by dayly practise now used in sundry parts of this Kingdom, as well because of the temperate coolnesse thereof, which in a kindly manner asswages the lime and sand, as also through moysture which distilling through those warme soyles both quicken the cold starved earth, and giveth a wonderfull entrance to the seed, that shall be thrown into the same.

Manure.

After your ground is thus sufficiently drest with these soyles Harrowing and manures, you shall then plow it again the second time, and other law which would be after *Michaelmas*; after the plowing you shall break it again, and be sure to mixe the earth and the manures very well together, then you shall break it in gentle manner

with your Harrows, and then sow it ; which done, you shall harrow it much more painfully, and not leaving any clots or hard earth unbroken that the Harrow can pull in peeces : as touching the seed, which is fittest for this earth, it is the same that is spoken of in the next foregoing Chapter : as namely the best Rye, or the best Mallin, which is Rye and Wheat equally mixt together, or if there be two parts Rye, and but one Wheat, the seed will be so much the more certain and sure holding ; and this seed you may sow on this ground three years together, then Barley, then Oats, and so forth, as is formerly writ of the grounds foregoing. After your ground is sown and harrowed, you shall then clot it, flight it, and smooth it as you did the other ground before : and then lastly with your back Harrows (that is, with a pair of harrows, the teeth turned backward from the ground, and the back of the harrow next to the ground) you shall run over all the ground and gather from the same all the loose Grass, Twitch, or other weeds that shall any wayes be raised up, and the same so gathered you shall lay at the lands end in heaps, either to rot for manure, or else at the time of the year to be burnt for fuel, and sprinkled on the earth the next seed year.

Lastly touching the weeding of this soyl. you shall understand the weeds which are most incident therunto, are all the same you first went about to destroy ; as namely, Twitch rough wild Grass, & young woody undergrowth, besides thistles, Harbottles, and Gypsie flowers ; therefore you shall have a great care at the first appearance of the Corn, to see what weeds arise with it, (for these weeds are ever fully at hand as the Corn) and as soon as you see them appear, both your self and your people with your hand shall pull them up by the roots, and so weed your land as you would weed a garden, or Wood ground. Now if at this first weeding (which will be at the latter Spring commonly called *Michaelmas*, or the Winter Spring,) you happen to omit and let some weeds passe your hands unpulled up (which very well may chance in so great a work) you shall then the Spring next following (seeing them as high, or peradventure higher than the Corn) with your wooden nippers pull them up by the roots from the ground, and so cast them away.

As touching the cutting them up close by the ground with ordinary weed-hooks, I do in no sort allow it; for these kind of weeds are so apt to grow, and also so swift in growth, that if you cut them never so close in the Spring, yet they will again over-mount the Corn before Harvest, and by reason of their greatnesse, toughness, and much hardnesse, choak and slay much Corn that shall grow about them, and therefore by all means you shall pull these weeds up by the roots whilst they are tender (if possible you can) or otherwise in their strongest growth, such their sufferance breedeth great loss and destruction.

CHAP. 9.

Of the Plowing, Tilling, Ordering, and Enriching of all barren Sands, which are covered with Mosses, or mossy sticking long Grasse.

UNto these foregoing barren Sands, of which I have already written, I will lastly joyn this last barren land being of all earths whether Clay or Sand, the most barren. And that is filthy, black moorish Sand which beareth nothing but stinking purified Grasse or Moss, or Moss and Grasse mixed together, to which not any beast or cattel, how coorsly or hardly bred soever will at any time lay their mouths; and this kind of ground also is very much subject to marshes and quagmires, of which that which is covered with Moss, or Grasse, is the worst, and that which is tufted above with Rushes, the best, and soonest reduced unto goodnesse, in brief, all these kind of grounds generally are extremely moyst and cold, the superabundance whereof is the occasion of the infinite sterility and barrennesse of the same.

And therefore he that is Master of such unprofitable Earth, and would have it brought to some profit or goodnesse, shall first consider the situation of the ground, as whether it lye high or low: for some of these marsh grounds lye low in the Vallies, some on the sides of hills, and some on the tops of Mountains: then whether the much moysture thereof be fed by River, Lake, or Spring, whose veins not having curreant passage through, or upon the earth, spreads lookingly over all the

the face thereof, and so rotting the mould with too much wet makes it not only unpassable, but also utterly unprofitable for any good burthen.

Grounds for
Fish-ponds.

Now if you find that this marish Earth lye in the bottom of low valleys, as it were garded about with hills, or higher grounds so that besides the feeding of certain Springs, Lakes, or Rivers, every showre of rain or falling of water from higher grounds bringeth to these an extraordinary moisture to maintain the rottenness, in this case this ground is past cure for grass or Corn, and would only be converted, and made into a fish-pond, for the breeding and feeding of Fish, being a thing no less profitable to the Husbandman for keeping his house, and furnishing the market than the best Corn lands he hath; and therefore when he maketh any such pond, he shall first raise up the head thereof in the narrowest part of the ground, and this head by driving in of stakes and piles of tough and hard wood, as Elm, Oak, and such like, and by ramming in of the earth hard between them, and saddling the same so fast that the mould can by no means be worn down or undermined with the water. he shall bring it to as firme earth as is possible, and in the midst of this head he shall place a sluice or flood gate made of sound and clean Oak timber, and plancks, through which at any time to drain the pond when occasion shall serve: and this done, you shall digge the pond of such depth, as the earth conveniently will bear, and casting the earth upon either side, you shall make the banks as large and strong as the ground requireth; then if any spring which did before feed the earth be let out of the compass of the pond (because it lyeth too high to be brought in) then shall you by drawing gutters or drains from the spring down to the pond, bring all the water of the springs into the pond and so continually feed it with fresh and sweet water. Then stocking it with fish of best esteem, as *Carp, Tench, Bream, Perch*, and such like and keeping it from weeds, fish and vermine, there is no doubt of the dayly profit.

But if this marish and low ground, though it lye low and have many springs falling upon it, yet it lye not so extreame low but that there is some River or dry Ditches bordering upon it, which lye in a little lower descent, so that except in case of
inad.

inundation the river and ditches are free from the moisture of this ground, but where there is any overflowing of waters, there this marsh ground must needs be drowned; in this case, this ground can hardly be made for Corn, because every overflow putteth the Grain in danger, yet may it be well converted to excellent pasture or meadow, by finding out the heads of the Springs, and by opening and cleansing them, and then drawing from those cleansed heads, narrow drains or furrows, through which the waters may passe to the neighbours ditches, and so be conveyed down to the low Rivers: leaving all the rest of the ground dry, and suffering no moistures to passe, but what goeth through these small deep Channels; then as soon as Summer commeth, and the ground begins to harden, if you see any of the water stand in any part of the ground, you shall forthwith mend the drain, and help the water to passe away, which done: (as the ground hardneth) you shall with hicks and spades lay the swarth smooth and plain, and as early in the year, as you can conveniently, you shall sow upon the ground good store of Hay-seeds, and if also you do manure it with the rotten staddles or bottoms of hay-stacks, it will be much the better, and this staddle you shall not spread very thick, but rather of a reasonable thinnesse, that it may the sooner rot and consume upon the same.

But if this marsh and filthy ground do not lye so low as these low valleys, but rather against the tops of hills: you shall then, first open the heads of all the springs you can find, and by severall drains or sluices, draw all the water into one drain, and so carry it away into some neighbouring ditch and valley; and these drains you shall make of a good depth, as at least two foot, or 2 foot and a half, or more, if need require, and then cross-wise every way overthwart the ground: you shall draw more shallow furrows, all which shall fall into the former deep drains, and so make the ground as constant, and firme as may be: then having an intent to imploy it for corn, you shall bring your Plow into the ground, being a very strong one, and not much differing in Timber-work, or Irons from that which turneth up the clay-grounds, and laying before the Plow long waddes or roulees of the straw of Lupins, Pease, or else Fetches, (but Lupins is,

Draining of
wet grounds.

is the best)you shall turn the furrows of the earth with the plow upon the wades, and so cover or bury them in the mould, and thus do unto every furrow, or at least unto most of the furrows; you turn up, and so let it lye a little time to rot, as by the space of a fortnight or three weeks, in which space, if the ground receive not rain and moysture enough to rot the straw thus formerly buried, you shall then by stopping the draines, and making the Springs over-flow, gently wash the ground all over and no more, & then presently drain it again : which done, as soon as the earth is dry, you shall hack it and break it into small pieces, and then you shall also sand it, lime it, and manure it.

And I. Ifly you shall Marl it, but if no sale sand be to be had, then instead of it you shall chalk it, yet of all the rest you shall take the least part of chalk.

This done, about the latter end of *July* you shall plow up the ground again with somewhat a better and deeper stich than you did before, that if any of the straw be unrotted or unconsumed ; it may again be raised up with the new moyst earth, and so made to wast more speedily, and if at this second carrying you do see any great hard clots to rise, then with your hacks you shall break those hard clots in pieces laying the Land clean without clots, weeds, or any other annoyance, and so let it rest till *October* at which time you shall plough it over again, hack it harrow it, and then sow it with the best Seed wheat ; for this soyl thus drest and manured, albeit it be of all other the most barren, yet by reason of this moysture, which at pleasure may be put to it, or taken from it, and by the mixture of these comfortable soyles and composts, it is made as good and fruitfull as any earth whatsoever, and will bear Wheat abundantly for the space of three yeares together, then good Bailey the fourth year, with a little help of a Sheep-fold, or Sheepes manure : then Rye the fifth year ; Oates the sixth, the seventh and eighth years; small Pease the ninth year ; good meadow or pasture three yeares following, and then to be new drest againe, as before-said.

Marrowing.

Now as soon as your Seed-Wheat is sown, you shall then harrow the ground again, and be sure to cover the Wheat both deep and close ; as for the clots which shall arise from this soyle,

it shall not matter whether you break them or no, for by reason of their moysture, they will be plyant and easie for the Wheat to passe through, so that you shall not care how rough your land lye; so it lye clean, and the Corn well covered, but for all other seeds you shall break the clots to dust, and lay the land as smooth as may be.

Now for the weeding of this soyl, you will not be much troubled therewith, because this ground naturally of its own accord putteth forth no weeds, more than those which are ingendred by the new made fruitfulness thereof, and those weeds for the most part are a kind of small sedge or hollow reed; any of which if you see appear, or with them any other kind of weed, you shall at the first appearance, either pull them up by the roots with your woden nippers, or else cut them close by the ground with your weed-hooks.

CHAP. 10.

A generall way for the enriching of any poor arable ground, either Clay or Sand, with lesse charge than formerly.

IF the former demonstrations and instructions which I have shewed thee, appear neither too difficult, or too costly (for now I speak to thee plain, simple, poor Husbandman) and yet thou art master of none but barren earth: then thou shalt by thine own industry, or the industry of thy Children, Servants, and such like; or by contracting with Taylors, Botchers, or any poor people that will d serve a penny, gather up, get or buy all the rags, shreds, old base pieces of woollen cloth whatsoever, which are onely cast, and fit for nothing but the Dung-hill, and of these if thou canst compass but a sackfull, or a sackfull and a half, is sufficient for the dressing of an acre of arable ground. These threads & rags (torn small) or hackt and bewed into small pieces or bits, thou shalt thinly spread over the land before fallowing time, then comming to fallow, plough them all into the ground, & be sure to cover them, then give your land the rest of its ardors as stirring, soyling, ridging, &c. in their due seasons, and after an husbandly manner: then when you come to sow it, you shall take

Steeping of
seed corne,

the slimie thick water which commeth from dung-hills, or for want thereof, water in which Cowdung hath been steeped, and therein you shall steep your seed corne; that is to say; if it be barely, you shall steep it for the space of thirty six hours; or thereabouts; if it be Wheat, but eighteen houres; and if it be Pease, but twelve houres; for Rye, or Oats, not at all: and the seed thus steeped, you shall sow it according to good Husbandry, and there is no doubt of wonderfull encrease.

Or any pulse.

There be others which take the seed corne, and steeping it in good store of Cow-dung and water, stire altogether for an houre in the morning, and an houre at night, and then being settled, draine the water from the seed and the dung, and the next morning sow the corne and the dung both together on the land, being sure not to scant the Land of Seed, and no doubt the encrease will be wonderfull.

Now if this cannot be conveniently done, or that you want dung, if then you take ordinary water, and therein steep your seed, it is good also, and especially for barley, and is approved by daily experience.

Shaving of
Horn,

But now me thinks I heare the poore man say, that here is but one acre drest, and that is a small proportion; to this I answer, if thou beest able but to dresse one acre with these woollen raggs, thou shalt then search among the Horners, Tanners, Lanthorn makers, and such like, and get all the wast shavings of horn which thou canst possibly compasse, as before of the raggs so of these a sack and a halfe, or two sacks will dresse an acre: these shavings (which are indeed good for no other use) you shall scatter upon the land as you did the raggs, then plow them in after the same manner, so order the ground, so sow, and in the same manner steep the seed, and questionlesse the increase will be wonderfull great: these manures will last five yeares without any renewing. Now if of these you cannot get sufficient to trim all your ground, you shall then deale with Butchers, sawe women, Slaughter-men, Scullions, and the like; and from these you shall get all the hoofs you can, either of Oxe, Cow, or Bull. Calfe, Sheep, Lamb, Deer, Goates, or any thing that cheweth the cud, and which indeed, if not for this use, are otherwise utterly cast away to the dunghill, and despised: and these hooves

Hoofes of cat-
sell,

you shall cut and hew into small pieces, and scatter thick upon your land at following time, then plow them in, as aforesaid, and do in all points as with the other manures already recited, and so lay your seed, and there cannot be a greater enricher of arable ground whatsoever.

Now if all these will not yet compost your land, you shall cause what sope ashes you can get or buy, for of all manures there is none more excellent, for besides it giveth an exceeding strength and fatnesse to the Land, it also killeth all manner of weeds, great and small, as Broom, Gorse, Whinnes and the like, and it killeth all manner of Worms, & venomous creeping things, Of Woad. it is excellent for Woad, and the ground renewed yearly, therewith may be sown continually: these sope ashes must be laid on the land after fallowing, and then stirred in; two load thereof will serve to dress an acre: when it is fit for seed, the seed must be sown as aforesaid, and then sown, and the increase will quit the charge manifold.

These sope ashes are also excellent good for Flax, and Flax, being thinly sown upon the Land, after it is plowed; and immediately before the Seed be sown: but if you have more Land to dress, then you must make use of your own ordinary manure, The enriching of ordinary manure. as is Oxe-dung, Horse-dung, and the like, which that you may make richer and stronger then otherwise of its own nature it would be, you shall cause continually to be strewn upon it, all your powdered beef broth, and all other salt herbs or bines, which shall grow or breed in your house, of all manner of soap suds, or other suds, and washings which shall proceed from the Laundry, and this will so strengthen and enrich your manure, that every load shall be worth five of that which wanteth this help. There be divers other manures, which do wonderfully enrich and fatten all manner of barren grounds, as namely the hair of beasts hides, The hairs of beasts hides. which for the most part. Tanners and Glovers do cast away; this thinly spread on the Land, and plowed in, brings every year a fruitfull crop. Again, if Braken or Fern be layed a foot thick upon the earth, and then a layer of earth upon it, then another layer of braken, and a layer of earth upon it, then another layer of braken, and another layer of earth, and so lay upon layer, till the heap be as bigge as you intend it, and so let it rest all the Winter following, there cannot be a better

To rot dung
quickly.

manure for any arable ground ; for you shall understand that the earth will so rot the braken, and the braken so soake into the earth, that they will become both one rich substance. And herein you shall note, that whensoever you would have any substance (of what condition soever) quickly to rot and turn to manure, that the only way is to mixe it with earth, and that will in short space bring it to rottenesse. Now this braken and earth thus rotted you shall lay upon your land as you do your ordinary dung of Cattell, and then sow your seed being steeped as aforesaid.

Of Malt-dust.

Next your Malt-dust which is the sprout, come, smycham, and their excrements of the Malt, as an excellent manure for arable land, allowing three quarters thereof for an acre, and strowing it upon the land after it is plowed and ready to be sown.

Of Rotten
Pilchers and
garbage.

There is another manure, which albeit it is not plentiful every where, yet in some places it is, and not inferior to any manure before spoken of, & that is your rotten Pilchards after the oyl is taken from them & the carcasses cast to the dunghill, this laid on the land, & plowed in, bringeth Corne in great abundance: and no lesse doth the carcasses and garbage of all kind of fish whatsoever, especially of sea-fish.

Of blood of
fals.

Lastly the blood entralls and offall of any beast is an excellent manure for any kind of grain, plant, or tree, but especially for the Vine, for to it there is no nourishment of greater force or efficacy: also, if this blood be tempered with lime, it is exceeding comfortable for grain, and destroyeth worms, and other creeping things which hurt Corn, only it must not be applyed presently, but suffered for a little time to rot, lest the too much heat thereof might scorch and do hurt to the root of the Corn: this manure is to be laid on the earth when you sow it, and sow the seed and it harrowed or plowed in together, which done after the order of good workmanship, there is no doubt of the encrease.

C H A P. I I.

*How to Enrich for Corn, any barren rough, woody ground,
being newly stubbed up.*

IF you have any barren woody ground, which is newly stubbed up, and that you would convert it to arable, you shall then take a great quantity of the underwood, or worst brush wood which was cut from the same, and in the most convenient place in the field, as in the midst, or near thereabout, you shall frame it into a broad hollow pile, and then cover it all over with great sodds of earth, which done, set fire on it, and leave no part thereof (either wood or earth) unburnt, then take those ashes and spread them all over the field, so far forth as you mean to plough up, then with a good strong plough fallow the ground as deep as you can, and so let it rest till it be almost May; then take either Fern, Stubble, Straw, Heath, Furrs, Sedge, bean stalks or any other waste growth, take I say either any one, or more of these or altogether, as you stand possess of them, and burn them to ashes and therewith cover your land the second time, and then in summer stirre it within a Month, after soyle is then at the beginning of *October*, or a little before, plough it again, and sow it with Rye the first crop, and you shall see the increase will be very plentiful, the next year you may sow it with Wheat, the third year with Barley, the fourth year with Pease, Lupins, Fetches, or any other pulse, and then begin with Wheat again; for it is credibly said, that this manner of dressing these barren, woody grounds, shall maintain and keep the earth in good heart; and strength in the worst places, for the space of four years, in that which is in any thing reasonable for the space of six yeares, and where there is any small touch of fertility, for the space of sixteen years; of which there are dayly experiences in *France* about the Forrest of *Arden*, and some with us here in *England* in many woody places.

Wood ashes.

Ashes of Fern,
Straw, &c.

CHAP. XII.

The manner of reducing and bringing unto their first perfection all sorts of ground, which have been over-flowed, or spoiled by salt water, or the Sea breach, either arable or pasture, as also the enriching, or bettering of the same.

The difficulty
of this labour.

The virtues
of Salt.

The vices
which come
from Salt;

THere is nothing more hard or difficult in all the art of husbandry, then this point of which I am now to intreat, as namely, the reducing and bringing unto their first perfection all sorts of grounds, which have been over-flowed, or else spoiled by the Sea breach, and bringing in of too great abundance of salt-water, which to some men of little experience, and free from those dangerous troubles, may appear a matter very slight and the wound most easie and curable; and the rather, because in all my former relations and demonstrations, touching the bettering of every severall sort of ground, I do apply, as one of my chiefest ingredients or simples, by which to cure barrennesse, Salt-sand, salt-weeds, salt-water, salt-brine, Ashes, Lime, Chalk, and many other things of salt nature, as indeed all the manures and marles whatsoever, must either have a salt quality in them, or they cannot produce fruitfulnessse, so that to argue simply from naturall reason; If salt be the occasion of fruitfulnessse and increase, then there cannot be much hurt done by these over-flowses of the salt-water, that it should rather adde a fattening and enriching to the ground, then any way to impoverish it, and make it incapable of growth or burthen. But experience, (which is the best Mistress) shews us the contrary, and there is nothing more noisome and pestilent to the earth, then the super-abundance, and too great excess. of salinesse. For according to our old Proverb, of *omne nimium*, that too much of every thing is vitious, as we see in the state of man's body, that your strongest poysons, as *Antimony* or *Stibium*, *Coliquintida*, *Ruberb*, and the like, taken in a moderate measure, are most healthfull, and expell those malignant qualities which offend the body, and occasion sickness; but taken in the least excess that can be devised, they then (out of their vitious and naughty qualities) do suddenly and violently destroy all health, and bring upon the

body

body inevitable death, and mortality; so is it with this matter of salt, and the body of the earth; for as by the moderate distributing thereof, it correcteth all barren qualities, disperseth cold, and naughty vapours; and yieldeth a kind of fatnesse and fruitfulness, whereby the Seed is made more apt to sprout, and the ground more strong or able to cherish the same, till it come to perfection, through the sharp, warm, and dispersing quality thereof; so being bestowed in too great abundance and excess, whereby the earth is surfeited, and as it were overcome, and drowned up with too much of this naturall goodnesse, and helpfull quality, then all his proper vertues turn to egregious vices, as his wholesome sharpnesse to a fretting, gnawing, and destroying greedinesse, his comfortable warmnesse to a consuming and wasting fieriness, and his gentlenesse in dispersing to an infectious and venomous pollution, by the joynt qualities of all which together, the ground is made neither fit to receive any thing from the hand of the Husbandman, nor yet to produce or bring forth any of it self, because every good quality is abused or expelled, and nothing but unnaturallnesse, and sterility left, which like a Serpent lodgeth in the ground, and will suffer no good thing to have society with it: and these are the effects and mischiefs which are occasioned by these Sea-breaches, or inundations of the salt water.

The abuse of salt in excess.

It is certain, that although in the salt marshes, where the Sea cometh in at certain times, and onely washeth or sprinkleth the ground all over, and so departeth, there is neither want of grasse, nor yet complaint of any evill quality in the grasse: yet it is most certain, that no overflow of salt water, how little or moderate soever, can be truly said to be wholesome for any kind of grasse ground whatsoever; for grasse is compounded, of an infinite world of plants and simples, and most of them of several natures and qualities, so that if it give nourish ment to one, yet it may destroy tenne, neither do I find it by any of the Ancients simply and properly applied unto the grasse grounds, but first unto the arable, in which being spent is primary, or first strength upon the seed, (which is a great and greedy devourer, or eater up of the strength, and fatnesse of the earth) it then prepares, and makes the ground more able and fit to bring forth

Of salt moderately used.

No overflow of salt water good for grasse.

The grounds
of the salt
Marshes.

forth grasse and that of the best and finest kind: for although the Masses of the Salt-marshes sind a singular and rare propher in those grounds for the feeding, breeding, fattening, and sustaining of their great Flocks of Sheep; which upon these salt grounds, they say will never rot or perish by that universall disease, yet must they not impute it to the great quantity, goodnesse or any growth in the grasse, but to the salt which they lick up in the grasse, and to the salt quality of the grass: which is not only an Antidote or preservative against that noysome and pestilent mortality, but also a delightfull and pleasant food where in those Cattell take more contentment then in any other thing whatsoever; so that I must necessarily rest upon this conclusion, that as but moderate washing and overflowing of Salt-waters are no certaine or particular great helps unto grass-grounds, especially if they be applyed thereunto, and to that purpose simply at the first, without any other preparative or working by a former meanes, as by tillage, digging, delving, or the like; so the exceeding great inundation or Sea breaches which lye long soaking and sinking into the earth must needs be a certain infallible, and almost incurable cause of barrenness: eating, spoiling, and consuming the very rootes of all manner of plants, trees, and growths, by which the ground is made utterly incapable of generation or bringing forth: and therefore where these great inundations or over flowings cannot be either prevented or avoyded, but as the seasons of the year they doe and must hold their courses, there I would not wish any man to bestow either his labour or his cost, for it is losse of time and losse of substance: but where it is to be prevented or avoyded by industry, or that those overflowing or Sea-breaches come and happen by casualty or change, as either by the unnaturallnesse and superabundance of tydes being driven in by the violence and impetuousnesse of outrageous winds, or by any neglect or breach in the Sea-wall, or other mishaps of the like nature, which hapneth sometimes scarce once in an age, at the most not above once or twice in many yeares; in these cases there is most certaine remedy, and the ground so spoiled and wasted may by art and industry be againe reduced and brought to the former perfection and goodnesse; nay, many times amended and freed

A true cause
of barrenness.

Where this
annoyance is
incurable.

Where it is
curable.

fred from many faults and sterile qualities, to which it was either naturally addicted, or else by chance and accident grew there into, by continuall wearing and imployment without rest or refreshing, by the artificiall meanes of wholesome manures, or other strengthening which ought to be applied before these faults grow in extremities.

Now touching the cure of these grounds which are thus worn out, decayed, and made barren by these inundations of Salt-water, the owner thereof is first to draw into his consideration, that as the malignity and evill quality of the earth is grown betwix much fretting growing and wasting of the Salt, so it must be allayed and qualified by a quite contrary condition, which is freshnesse: the contrary then to salt water, must of necessity be fresh water, so that you are to cast about your judgement, and by the view, situation, and level of the ground, which for the most part can have but little difficulty in it, because these grounds upon which the Sea thus breaketh, must ever be the lowest of all other, so that a true descent coming unto it and a true ascent coming from it, there is no hardnesse to convey any water course thercunto. Look how to bring a fresh life which may conquer and overcome this fatnesse, and that must therefore be fresh water, which by channels, ditches, furrowes, sluices, and the like you may bring from any fresh river, spring, pond, or other fresh watercourse (though removed some distance of miles from the place to which you would convey it) to the very place to which you desire to have it, and with this fresh water you shall wash and gently drowne over so much of your spoyled ground as you shall be able reasonably to deale withall. in other crosse and labour for that yeare; and if you have plentifull store of fresh water, then having (as I said) drowned it over gently, about five inches, or halfe a foot deepe, you shall

The manner of the cure.

One Contrary helps another.

The watering with fresh water.

How to draine away the fresh water.

How oft to
drown the
earth.

and bank into the sea ; and having thus drained away the first water , you shall then open your sluices of fresh water again , and drown your ground over the second time, and do in all things as you did before , and thus according to the plentifulness of your fresh water , you shall drown your ground ; or at least wash it over with fresh water twice a week, before the beginning of the spring, and if the salt water have lain long , or be but new departed, then you shall use your fresh water , for some part of the Spring also.

Helps if fresh
water be want-
ing.

Whether brack-
ish water be
wholesome.

Now some may object unto me here, (and it is a matter altogether unlikely) that in some of these places , where these Inundations and breaches are , it is impossible either to find fresh water, and to bring fresh water unto them , because all the springs for many miles about , being made naturally brackish, and the rivers by the infection of the salt tides , having lost the greatest part of their sweet freshness ; the question now resteth , whether these brackish waters are wholesome for this purpose , I or no ? To this I must needs answer , that they cannot in any wise be good for these spoiled grounds , because the earth naturally is of an attractive and drawing condition , sucking and gathering unto it self any thing that is of a sharp sweet, or sourer taste, and especially saltness , so that being covered with those brackish waters , it will draw from them only their salt, (of which it hath too much already) and no part of the freshness which should qualify and amend it : therefore , if either your ground be thus situated , or your necessities thus unsupplied, it is better, that you rather forbear this labour of washing or drowning your earth, (though it be the first, the speediest and surest cure of all other) than by watering it with infinite and unwholesome waters , rather encrease the mischief, than any way delay it.

The first time
of plowing, &
the observations
therein.

How to mixe
raie.

After you have watered your ground , (if it be a work possible to be attained unto) or otherwise neglected , (it being a thing not possible to be found) you shall then about the latter end of *March* , plow up all the ground with a good deep sitch, turning up a large furrow , and laying it into lands, raise them up as much as you can , and make them round, then look
of

What nature or temper the earth is, as whether it be fine sand, rough gravell, stiffe clay, a or mixt earth, or any of these contracted together; If it be a fine sand, either white, red, or brown, it matters not whether, then you shall take any clay earth which is free from these salt washings, being of a meane or small stiffness, and likewise of as meane and little richness, which being dugged out of some banck, pit, or other place where least losse is to be had, you shall carry it in tumbrils or carriages to the overflowed ground, and there first lay it in heapes as you doe manure, then after spread it all over the Land, and being dry, with clottingbeetes breake it as small as you can possibly, for this hungry Clay being of no rich and fat condition, will so suck and draw the salt into it, that it will take away much of the ill quality, and mixing his tough quality with the loose condition of the sand, they will both together become apt for fruitfulness and generation.

If the spoiled ground be a rough hard gravelly earth, then you shall mixe or spread upon it the best and richest fresh Clay you can get, or if there be any such fruitfulness neare about you, then with a good blew Marle, for that is the coolest and the freshest, it will the soonest draw out the salt from the gravell, and give it a new nourishment, whereby any seed shall be fed and comforted which is cast into it.

The mixture for Gravell.

If the spoiled earth be of its owne nature a stiffe and tough Clay, which is but seldome found so neere the Sea shore, then after the plowing you shall mix it and cover it over with the finest and finest Sand that you can possibly get, for that will not only separate the Salt from the Clay, and take away the natural hardness and stiffness of the same, which hindereth and suffocates the tender sprouts, so as they cannot easily get out of the earth, but also by lending a gentle warmth, will assuage the ill quality of the clay, and make it bring forth most abundant-

The mixture of Clay.

The mixture of mixt earth.

Lastly, if the same spoiled earth be of a mixed quality, then you shall look whether it be binding or loosening. If it be binding, then you shall mixe or cover it with fine fresh sand; loosening, then with a reasonable rich and tough clay, for so you shall bring it to an open and comfortable temper, making

it able both to receive cherith and bring forth the seed ; which before either too much wet, or too much drynesse did stifle and bind up within the clots and mould, so as it had no strength to bear it self through the same.

The second
plowing.

Election of
manures.

The best ma-
nures.

The ordering
of the manure.

The third
plowing.

When you have covered your lands with this mixture, you shall then plow it over againe before Midsummer, turning the new laid earth unto the old earth, and as soon as that labour is finished, you shall then lade forth your manure or compost unto it, in which you are to have a great care what manure you elect for that purpose, for it is not the richest and fastest manure as your Pigeons dung, or Pullets dung, Lime, Chalk or ash, your Horse-dung, your shovelings upon high waies, your beasts houses, your horse shavings, your Hemp weed, or any other weed which groweth neare the seydge of the sea, neither your Ox, or Cow dung, though of all before named, that is the best which doth the most good upon these spoyled grounds. because they have all in them a strong quality of saltnesse or sharpnesse, which will rather add then diminish the evill quality of the earth, but in stead of these you shall take the mud of dried bottoms of Lakes, Ponds, and Ditches of fresh water, and the moysture or wetter such mud or bottoms are, the better it is, or straw which is rotted by some fresh water course, rain, or the like: by no means that which is rotted by the urine or stale of horse or cattle for that is the saltest of all other, or you may take any weeds which they doe grow in fresh Rivers, Ditches, Ponds, or Lakes, especially those which grow at the bottoms of Willow, Sal-low, or Olier trees, or you may take the old ragges of wollen cloth, or any other manure which you know to be the worst left or freshest, and with any of these, or all of those together you shall very plentifully cover your ground all over, and immediately upon the covering or laying on, see you presently plow it, land after land; for to give it any long respit after it is spread, the Sun out of his attractive and strong naturall will exhale and draw out all the vertue from your manure, and so spoyl much of your labour.

When you have thus manured it, and plowed it, you must then let it rest till Michaelmas, at which time you may plow it the last time, and then sow it with the strongest and hardest

Wheat

what you have, of which the white Pollard is the best & there is no question but if it be safe from a second inundation, your crop will both be plentiful & rich, and also acquit and pay largely for all your former charges. The second yeare you need but onely plow it as aforesaid, and then sow it with good Hemp-seede, and be assured you will have a brave crop arise thereof, then the third yeare you shall plow it as flat as you can, still throwing it down and not raising it up at all, and then sow it with the best Oates you can get, according to the nature and strength of your Country, and be sure to harrow it well, and to breake any clot, and make the mould as fine as is possible, and the next yeare after your Oates, lay it for grasse, and I dare be bold, it will be a reasonable meadow; yet would I not have you this year to p. have it for that purpose, but rather to graze it with Sheep or Cattel, especially Sheepe, of which I would have you lay on grass. The second yeare sowing and third.

to do so; for it matters not how neere or close to the ground you graze it; for the next yeare it will become to the fullness of perfection, and be as profitable or more profitable ground than it was, and then you may apply or accomodate it for what they please, either arable, Meadow, or for continuall grazing. Laying the earth for grasse.

And thus much touching the manner of reducing againe, and bringing unto their first perfection, all sorts of grounds which have been over-flowed or spoyled by Salt-water, or the Sea-brashes, whether it be arable or pasture; as also the enriching or bettering of the same. Or grazing.

CHAP. XIII.

Aske the way to enrich barren Pastures, or Meadows, without the help of water.

If your barren Pastures or Meadows be so seated, that there is no possible means of washing or drowning them with water, you are then only to restore and strengthen them by the efficacy of manure or Soyl, without any other help, and this may diverse wayes be done, as by those manner of manurings, which I have formerly treated of. But to go a better, and briefer way to work, and more for the ease and capacity of the plain Husbandman,

bandman, whensoever you shall be posselt of these barren pastures, if the barrenness proceed from sand, or gravell, then for Clay manure. Husbands use to manare the pasture over with the best clay they can get, first laying it in heaps, then spreading it, and lastly, with clorting beetles breaking it into as fine dust as they can get it, and this labour, they commonly perform as soon as they can after Harvest, when the latter spring is eaten, and the earth is most bare; but if the barrenness proceed from an hungry, cold, and Moorish earth dry clay, then the manure is with the best moorish black earth which they can get, or with any moist manure whatsoever, especially, and above the rest, when the soyle that is digged out of old ditches, ponds, or dried up standing lakes, and this earth must be laid plentifully upon the ground in manure heaps, as afore said, that is to say; first in great heaps, then after broken and dispersed over the whole ground, and lastly, broken into small dust, and mixed with the swath of the ground, and this labour, as the other generally performed after the Harvest, as a time of most convenience, and giving the earth a fit respite to lack in the strength and comfort of the new earth, and also having all the Winter after with his frosts, snowes, and showers, to mellow, ripen, and mixe together one earth with the other: and doubtless this is a most exceeding good Husbandry, and not to be refeld or carpt against by any knowing or sound judgement; onely it is not the most absolute, or best of all waies whatsoever, but that others may be found somewhat more near, and somewhat more commodious.

The best way to enrich pasture or meadow. Therefore, whensoever you shall be owner of any of these barren pastures, or meadows, of what nature or condition soever the earth be, whether proceeding from gravell, sand, clay, or pestered with any other malignant quality whatsoever, to reduce it to fertility and goodnesse in the shortest time, and to the most profit, about the Month of *March*, when all pasture grounds are at the barest, and do as it were remain at a stand between decreasing and increasing, you shall begin then to lead forth your manure for the refreshing of these Earths, and the manure which you shall carry unto these grounds, shall be the soyl of streets within Cities or Towns, or the parings and gatherings up of the high-ways, much beaten with travell, also the earth

fortwo or three foot deep; which lyeth under your dung-hill Earth under
Dung hills. when the dung is removed, and carried away, for this is most
precious and rich mould, and is not alone excellent for this use,
but also for the use of Gardens, for the strengthening and comfor- To enrich
Gardens or
Orchards. ting of all sorts of tender plants, and for the use of Orchards, for
the comforting both of old and young Trees, when at any time
their Roots are bared, or otherwise when there groweth any mis-
like or decreasing.

You shall also take the fine earth or mould which is found in The mould
of Willow in
Tree. the hollow of old Willow-trees, rising from the root up almost to
the middle of the Tree at least so far as the tree is hollow, for than
this there is no earth or mould finer or richer.

Of all these manures, or of any one of them, or of as many as
you can conveniently get, you shall lead forth so much as may
very plentifully manure & cover your ground all over; you shall
first lay it on the earth in reasonable big heaps that the Sun may
not exhale the goodnesse out of it, and then at your best leisure, &
so soon as you can conveniently you shall spread it Universally
over the field, dispersing it as equally as you can, unlesse your
field be more barren in one place than in another, which if it be,
then you shall lay the greatest plenty where it is most barren, and
the lesse where you find the greatest fertility; yet by all means see
you scant not any place, but give every one his due; for to do other-
wise would shew much ill husbandry.

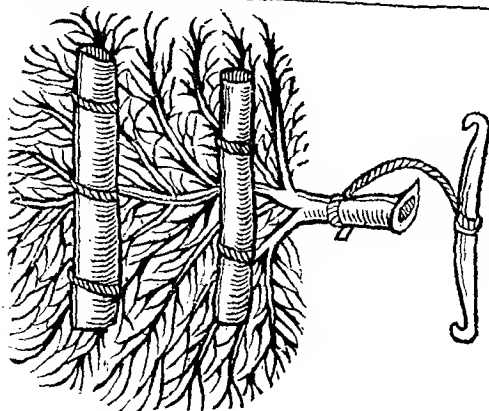
Now it is the use of some Husbandmen, that what mould or
earth is laid out from six a clock in the morning till three of the
clock in the afternoon, that they make their Hinds spread in the
evening before they go to supper; and questionlesse it is a very
good course, and worthy to be imitated of every good Hus-
band.

After you have laid forth your mould, and spread it all over
your pasture or meadow, then you shall make some boyes, girles
or other people, to pick and gather up all the stones, sticks, or
other unnecessary matter which might happen to be led forth
with the mould, and to pick and lay the pasture so clean as is
possible, which done it is to be intended that yet not withstand-
ing this ground will lye exceeding rough, both in respect
of the clots of earth, which will not easily be broken, as also in res-

spect of naturall roughness of these rich moulds which at this time being digged up in the wet will not easily be seperated or dissolved, and therefore when you have finished the labours before said, you shall let the clots rest till the Sun and weather have dried them, then after a ground showre (observing to take the first that falleth) you shall harrow your ground over, after this manner.

A new way of
Harrowing.

You shall cut down a pretty big white thorne-tree, which we call the Hawthorn-tree, and make sure that it be wonderfull thick bushie and rough grown; which done, you shall plash it as flat as you can, and spread it as broad as you can, and those branches or boughes which of necessity you must cut in sunder, you shall againe plash and thrust into the body of the Tree, binding them with cords or withs so fast thereto, that they may by no meanes scatter or shake out, and if any place appeare hallow or thin and cannot come to lie hard, firme, and sough upon the ground, then you shall take other rough bushes and thrust into the hollow places, and bind them from stirring also, till you have made your plash full and equall in all places, and that all the roughness may be as in a flat leuell equally touch the ground: when you have thus proportioned your Harrow, you shall then take great loggs of wood or pieces of timber: and with ropes bind them on the upper side of this rough Harrow, that the poise or weight of them may keepe the rough side hard, and firme to the earth, and then the Harrow will carry this proportion or figure,



To the big end of his horrow, you shall fixe a strong rope with a Swingle-tree with Treats, Coller, and Harneſſe, and one Horſe is fully ſufficient to draw it round about the Paſture or Meadow: ſo with this Horrow you ſhall harrow the ground all over, and it will not onely breake all the hard clots to a very fine duſt, but alſo diſperſe them and drive them into the ground, and give ſuch a comfort to the tender roots of the young graſſe, then newly ſpringing, that it will double and treble the increaſe. And for mine own part, this experience I my ſelfe have ſcene upon an extreame barren Paſture ground in Middleſex, Of Rub. where none of theſe good moulds or ſoyles could be got; but both and this Husbandman was faine to take all the rubbiſh & coorſe earth ^{sweepings,} even to the very ſweepings of his yard: and for want of enough thereof, to take any ordinary earth he could get, and with it hee dreſt the ground in ſuch ſort as I have now laſt ſhewed you, and this being done in Aprill, he had in June following as good Meadow as could bee wiſht for, and was the firſt Meadow I ſaw cut downe in all that Country: from whence I

draw this conclusion That where these better moulds or soyls are not to be had, if yet notwithstanding you take any ordinary mould or earth whatsoever, and with it replenish your Pasture or Meadow ground as is before shewed, that without doubt you shall find an infinite commodity, and profit thereby ; for even the rule of Reason, and generall experience shewes us, that any fresh or quick mould coming to the root of the Grasse, when it is in springing, must needs be an infinite comfort thereunto, and make it prosper, and shoot up with a double haste ; and therefore I would have every Husbandman to make much of the rubbish, sweepings, parings, and spitlings of his house and yard, and also of shovellings up of the high wayes, back lanes, and other such places; and especially if they be any thing clayie, or moorish, or sandy mixt with any other soyl; for of them he shall find great use, according to the Husbandry and experience already described.

Of Soape-
Ashes.

Lastly, there is not any thing that more enricheth Pasture or meadow ground then Soap-ashes, being thinly scattered and spread over the same, and this labour would ever be done at the latter end of *April*, for then Grasse is beginning to shoot up, and at that time finding a comfort, the increase will multiply exceedingly.

CHAP. 14.

How to enrich and make the most barren soyl to bear excellent good Pasture or Meadow.

Two wayes to
enrich earth.

TO speak then of the bettering and enriching of these barren earths, and reducing them to good Pasture or Meadow, it is to be understood, that there are but two certain wayes to compass and effect the same, namely water or manure.

You are then when you go about this profitable labour to consider the situation of the earth you would convert to Pasture and to elect for this purpose, the best of this worst earth you can find, and that which lyes lowest, or else that which is so descending, as that the bottome thereof may stretch to the lowest part of the continent, for the lower that such grounds lye, the sooner they are made good, and brought to profit : Next you shall consider

sider what burthen of grasse it beares, and whether the grasse be
 cleane and intire of it selfe (which is the best and likeliest soyl to
 be made fruitfull) or else mixt with other worser growths, as
 Thistle, Heath, Broom, or such like, and if it be burthened with
 any of these naughty weeds, you shall first destroy them by
 digging them up by the roots, and by burning the upper swarth
 of the earth with dry straw mixt with the Weeds which you
 shall cut from the same, then it shall be good for certain nights
 both before the first and latter spring to fold your sheep upon
 this ground, and that not in a scant manner, but very plentifull
 so as the dung of them may cover over all the earth, and their feet
 trampling upon the ground, may not only beat in the dung, but
 also beat off all the swarth from the earth, that where the
 Field goeth, there little or no grasse may be perceived,
 then whilest the ground is soft and thus trampled, you shall
 sow it all over with Hay-seeds, and then with your flat board
 beeles, beat the ground smooth and plain, which done, you
 shall then strow, or thinly cover the ground with the rotten
 faddes of Haystacks, and the moyst bottomies of Hay-barnes,
 and, over that, you shall spread other strong manure, of which
 Horse-dung, or Horse-dung, and mans ordure mixt together is
 the best, or for want of such, either the manure of Oxen, Kine,
 or other beasts; and this manure also you shall spread very
 thin upon the ground, and so let it lye till the Grasse come up
 through the same, which Grasse you shall by no meanes graze
 or feed with your Cattell, but being come to the perfectnesse of
 growth, you shall mow it down; and although it will be the
 first year but short and very coorse, yet it skilleth not; for the
 ensuing years shall it yeeld profit, and bring forth both so
 good grasse, and such plenty thereof as reasonably you can re-
 quire for this is but the first making of your ground, and altera-
 tion of the nature thereof: neither shall you thus dress your ground
 every year, but once in twenty or forty yeares, having plenty
 of water to relieve it. When therefore you have thus at first on-
 ly prepared your ground by destroying the barren growth
 thereof, and by manuring, sowing and dressing it, you shall then
 carefully search about the highest parts of the ground, and the
 highest parts of all other grounds, any way neighbouring round

Of watering
Grounds.

about it. and somewhat above the level thereof, to see if you can find any Springs in the same (as doublesse you cannot chuse but do, except the ground be of more then strange nature;) and the heads of all such springs as you shall find, you shall by gutters and channels draw into those ditches which shall compass your meadow round about, observing either to bring the water into that part of the meadow ditch which ever lyeth highest, and so let it have a currant passage through the ditches downe to the lower part thereof, and so into some Lake, Brook, or other channell, and in this sort you may bring your water a mile or two: Nay I have seen water brought for this purpose, three or foure miles, and the gaine thereof hath quit the charge in very plentifull manner.

Helps in the
Watering.

But if you cannot find any Spring at all, nor can have the helps of any Lake, Brook, River, or other channell of moving water, (which is a doubt too curious, as being cast beyond the Moon) you shall then not onely cast ditches about this your Meadow ground, but also about all other grounds, which shall ly about and that in such sort, that they all may have no passage but into the upper part of the meadow ditch, so that what raine so ever shall fall from the Skie upon those earths, it shall be received into those ditches, and by them conveyed into the meadow ditch: and to augment the store of this water, you shall also in sundry parts of those upper ground which are above the meadow, in places most convenient, dig large Ponds or Pits, which both of themselves may breed and also receive all such water as shall fall neere about them, and those Ponds or Pits being filled (as in the winter time necessarily they must needs be at every glut of raine) you shall presently by small draines, made for that purpose, let the water out from them into the ditches and so into the meadow ditch. and so stopping all the draines againe, make the Ponds or Pits capable to receive more water.

When and
how to water.

When you have thus made your ground rich with water, and that you see it flow (as in the wintertime necessarily it must) in plentifull manner through all your ditches, you shall then twice or thrice in the yeare or oftner, as you shall then thinke meet in the most convenientest places of the meadow ditch,

Stop the same, and make the water to rise above his bounds, and to over-flow and cover your meadow ground all over, and if it be a flat leuell ground, if you let the water thus covering it to lye upon the same the space of four or five dayes, or a weeke, it shall not be amisse; and then you may water it the seldomer. But if it lye against the side of a hill, so that the water cannot run upon the same, then you shall wash it all over, leaving no part unmoystened; and this you shall doe the oftner, according as the water shall fall out, and your water grow more or lesse plentifull.

The best season for watering.

Now for the best season or time of the year for this watering of meadows you shall understand, that from Alhallowtide, which is the beginning of November (& at which time all after-growth of meadowes are fully eaten, and cattle for the most part are taken up into the house) untill the end of Aprill (at the which time grasse beginneth to spring and arise from the ground) you may water all your meadows at your pleasure without danger, if you have water enough at your pleasure, and may spend or spare at your will; yet to do in the best perfection, and whereby your ground may receive the greatest benefit; you shall understand, that the onely time for the watering of your meadows is immediately after any great Fluxe of raine, falling in the Winter, any time before May, when the water is most muddy, soyle, and troubled, for then it carrieth with it a soyle or compost which being left upon the ground, wonderfully enricheth it and makes it fruitful beyond expectation, as daily is seen in those hard Countreies where almost no grasse grows but by this industry: and here you must observe, that as you thus water one ground, so you may water many, having ever respect to begin with the highest, and so let the water pass out of one ground into another untill it come to the lowest, which commonly is ever the most flat and leuell, & there you may let the water remaine so long as you think good (as was before shewed) and then let it out into other wast ditches or rivers. And here you shall know, that this lowest ground will ever be the most fruitful, as well because it lyeth the warmest moystest and safest from stormes and tempests, and also because what soyle or other goodnes this over flow of water, or the raine washeth from other grounds, it leaveth

leaveth upon this, and so dayly encreaseth the fertility, from whence you shall gather, that at the first making of these meadow grounds, you may bestow lesse colt of manure and other charges upon this lowest, flat, leuell ground, than on the higher : and so by that rule also observe to bestow on the highest ground, and the highest part of the highest ground ever the greatest abundance of manure, and so as you shall descend lower and lower to lay your manure thinner and thinner, yet not any part utterly unfurnished and void of compost : yet as before I said you are to remember that these meadow grounds need not thus much use of manure (having this benefit of water, and the first yeares dressing as was shewed in the beginning of this Chapter) above once in twenty years; nay, it may be, not above once in a mans lifetime.

And here also is to be considered that the water which cometh from Clay or Marl grounds, being thick muddy and puddly, is much better and richer than that which cometh from sand, gravell, or pibble, and so runneth clear and smooth, for that rather doth wash away and consume the goodnesse of the ground, than any way adde strength thereunto.

CHAP. 15.

Of the enriching and dressing of Barren grounds, for the use of Hemp or Flax.

Groundsill
for Hemp or
Flax.

YOU shall understand there are two sorts of grounds which out of their own natures utterly refuse to beare Hemp or Flax ; that is, the rich stiff black Clay, of tough solid and fast mould, whose extream fertility and fatnesse giveth such a surcharge to the increase of the seed, that either with the ranknesse it runneth all into Bun and no rind ; or else the seed being tender, and the mould sad and heavy, it burieth it, so deep therein, that it can by no meanes get out of the same : the other is the most vild and extream barren ground, which by reason of the climat wherein it lyes, is so exceeding sterile and unfruitfull, that it will neither beare these seeds, nor any other good seed ; and of these two soyls only I purpose in this place to treat; for which such soyls as will naturally and commodiously beare these seeds, I have nothing to do, in that I have sufficiently

ficiently written of them in mine *English Husbandrie*, and *English Housewife*, which are books onely for good grounds: but this for all such grounds as are utterly held without cure.

To begin then with the stiff black Clay, which albeit it be very rich for Corne, is most poor for these seeds, when you would red ice and bring it to bear Hemp or Flax, which neere unto the Sea coast is of greater price and commodity than Corn any way can be, especially adjoyning unto any place of fishing, in respect of Nets and other Engines which is to be made of the same, and which being dayly wasted and consumed, must likewise be dayly replenished: you must first with a strong plough, fit for the nature of such land, plow up so much ground as you intend to sow Hemp or Flaxe upon, about the midlt of May, if the weather be seasonable, and the ground not too hard: if otherwise, you must stay till a shewre do fall, and that the earth be moistned, then shall you hack it and break the clots in small peeces, then with the salt Sea-sand, you shall sand it very plentifully, but if that be not to be gotten, and that you be very well assured of the naturall richnesse of the earth, you shall then sand it with the best red sand you can get or find neer unto you, and upon every Acre of ground you thus sand with such sand, you shall sow three bushels of Bay salt: and then plow up again the earth, sand and salt together, which would be done about the latter end of the year, as after *Michaelmas*, and so let the ground rest till seed time, at which time you shall first before you plough it, go down to the low rocks on which the Sea-beats, and from thence with drags and other Engines, gather those broad leaved black weeds, which are called Orewood, and grow in great tufts, and abundance about the shoare; and these weeds you shall bring to your Hemp-land, and cover it all over with the same, and then you shall plow it again, burying the weeds within the earth.

And herein is to be observed that in any wise you must lay these weeds as wet upon the Land as when you bring them out of the Sea, provided still, that you adde no other wet unto them but the salt water, for so they are of all soyls and manures whatsoever the only best and fruitfullst, and most especiall for these seeds, and breed an increase beyond expectation.

When you have thus plowed over the ground, you shall then hack it againe, and then sow it with either Hemp or Flaxe-seed, which you please, and after it is so sown, you shall then harrow it (and not before) and you shall be carefull to harrow it into as fine mould as you can, and this mould is fitt by to runne fine enough, as well by reason of the fertility, as also of the mixture; yet what clots you cannot break with your Harrows, those you shall break with your clotting-beetle, and such like tools; then after the first great showre which shall fall after your sowing, you shall runne over your land thus sown with your back Harrows, that is, with a paire of large Harrowes, the wrong side turned upward, to wit, the teeth turned from the earth, and the back towards the earth; and if need be, you shall lay upon the Harrowes some indifferent heavy piece of wood, which may keep the back of the Harrowes closer to the ground, and so go over all the earth, and lay it as smooth and light as is possible, without leaving the smallest clot that may be, unbroken. Now if the ground be sown with Hemp, you shall not think of weeding it at all, because Hemp is so swift a grower, and such a poyson unto all weeds, that it over-runneeth, choaketh, and destroyeth them; but if it be sown with Flaxe or Line, which is a much tenderer seed, and bringeth forth more tender leaves and branches, then you shall watch what weeds you see spring up, and in their first growth pluck them up and cast them away, till you behold your Flaxe or Line to be grown above the weeds, and then you may let it alone also, for after it hath once gotten heigh, it will not be over-growne with weeds.

Making of ill
earth bear,
&c.

Now touching the other soyl, which through the extreame barrennesse thereof, refusing to bring forth any good fruit at all; you shall in all poynts dresse it, as you dresse your plain claye described in the second Chapter of this Book, beginning at the same time of the year that is then appoynted, or (if more necessary occasions hold you) if you begin later, it shall not be amisse, and then at *Michaelmas* you shall plow it over the second time, and manure it with sea-weeds, and so let it lye at rest till *March* (which is seed time) and then plow it againe, and manure it with sea-weeds againe, and after the plowing, you shall
hack

hack it, and it in the hacking you finde the earth stiffe and rough, then you shall harrow it before you sow it. and harrow it again, breaking the earth so small, and laying it so smooth as possible you can, using the help both of the clotting beetles, and all other tooles which may be available for breaking the earth and making the mould as fine as any ashes, then after the first great showre of rain, perceiving the ground to be well moistned, you shall instead of the back Harrows (which upon this earth may be too light) take the great rowler which is described in the book of the *English Husbandman*, being a great round place of timber of many iquares, drawn either by Horse or Oxen, but a single Horse is best both in respect of much treading the ground, as also for the swift going away or drawing of the same: for the swifter it is drawn, the better it breaketh the ground, and the lighter it leaveth the mould: and with this rowler you shall run over and smooth your ground very well, leaving no clot unbroken, and so let it rest.

As for the weeding of this ground, you shall not respect it at all, for naturally it will put up no weed, the very ground of it being a very great enemy thereunto, nor shall you need to dress this ground in the forme before said, above once in eight or ten years only every seed time, when you plow it (as you shall not need to plow it at any time, but seed time only) you shall before the plowing, cover or manure the Land with the sea weed before spoken of, which will give strength enough to the ground, without any other assistance.

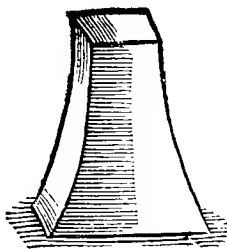
CHAP. XVI.

The manner of stacking of all kind of grain or pulse with greater safety, and least loss.

IN these barren and hard Countries, of which I have formerly written all sorts of buildings are exceeding costly and scarce, both in respect of the climate, which is commonly most extreame cold, mountainous, and much subject to storme and tempest, as also through the great want of Wood and Timber, which in those hard soyles doth hardly or never prosper, and therefore in such places buildings must be both small and dear, so that it will be very hard for the Husbandman to have house-rooms for all

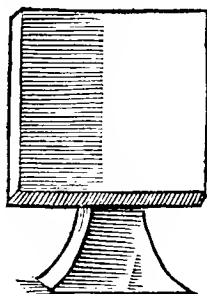
all his corn; but that of necessity he must be enforced to stek much, or the most part of his Corn without doores, which albeit it be a thing very usual in this Kingdome, yet is it in many places so insufficiently done, that the losse which redounds thereby (partly by the moisture of the ground, which commonly doth rot and spoyle at least a yard thickeesse of the bottome of the Stack next the ground, and partly through Mice, Rats, and other Vermine, which breeding in the Stack, do eat and devour a great part thereof; as also through many such like negligent causes) is greater than a good Husband may with his credit be guilty of, or a profitable Husband will by any means suffer to be lost so negligent.

To shew then the manner how to stack or mow your Come without doores, in such sort, as neither the ground shall rot it, nor these vermines destroy it, nor any other losse come to it by way of ill Husbandry, you shall first cause four peeces of timber, or four stones, to be hewed broad and round at the nether end; like the fashion of a Sugar-loaf, or this figure.

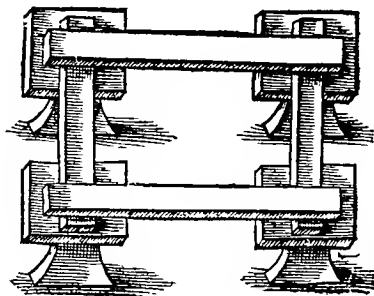


And these peeces of wood or stone shall be in length three-foot or thereabout, and in compasse or breadth at the bottome, two foote, or a foot and a halfe, and at the top not above one foot: these four peeces of wood or stone you shall place in your stack-yard, or other convenient place neere your thrashing-
 floor.

there: and you shall place them ten square, of an equall distance one from another: then you shall cut out four smooth boards of two inches and a half thick at the least, and full three feet square every way, and these boards you shall lay upon the heads or narrow tops of these stones or peeces of timber according to this Figure.



Then shall you take strong over-layers of wood, and lay them four square from one board to another, according to this Figure.



And then upon those over-lyers you shall lay other smaller peles close one by another, and then upon them you shall mow or stack all your Corne, whether it be Wheat, Barley, Oates, Pease, or any other kind of grain, and be sure if you make your stack handsome and upright, which consisteth in the Art and Workmanship of the Workman, you shall never receive loss in your Corn : for the raising of it thus two or three foot from the ground will preserve it from all moysture or hurt thereof, and the broad boards which cover the four ground-posts will not suffer any Mice or other vermine to ascend or come into the same.

Now for the manner of laying your Corn into the Stack, you shall be sure to turne that part of the sheafe where the eares of the Corne lye ever inward into the stack, and the other which is the straw end, you shall ever turne outward, and by that meanes you shall be assured that no flying Foule, as Pigeons, Crows, and such like, can do you any hurt or annoyance upon the same : Lastly you shall understand, that you may make these Stacks either round, square, or long-wise, yet round is the safest, and if you do make them long-wise, then you shall set them upon fixe ground posts, or eight, according to the length and proportion you would have it, and after your Stack is made, you shall then thatch it very well to keep out the wet ; also if when you do stack your Wheat, you doe top your Stack with Oates or other coorse grain, it will be so much the better, and the Wheat will lye in greater safety : for no part of a Stack well made, especially a round Stack, will so soone take wet or hurt, as the top thereof.

CHAP. XVII.

The diseases and imperfections which happen to all manner of Grain.

ALbeit the manner of Stacking and laying up of Corn or Grain in the form before shewed, may to every one give an assurance for the safe and profitable keeping thereof as long as it indureth therein, and abideth in the care, yet because divers necessities may compell the Husbandman to thrash out his Corn, as either, for present use of Straw, Chaffe, Garbage, or o-
the

other commodities needfull unto him (as the season of the year shall fall out) I think it most necessary in this place to shew how allmann reed Grain and Pulse, of what nature soever, may most safely and profitably be kept from all manner of annoyances, or corruptions whatsoever, being a work of that utility and goodnesse that not any belonging to the Husbandman doth exceed it: Nor shall it be sufficient to shew the offences and diseases of Grain with their cures and healthfull preservations, whilst it is in the Husbandmans possession, but also whilst it is in the earth, and at the mercy of cold, heat, moistnesse, or drynesse, and not onely subject to the malignant influences of Starres and Planets, with the increasing and decreasing of the moone and her operations: but also of divers other hurtfull Vermin; as birds, wormes, pismires, dorres, suales, moales, and other suchlike: some whereof consume and devour the grain ere it sprout, other sprouting when the kernell is rotten, and turned to sweet substance, and others after it is sprouted, by devouring the first tender leaves, before they have any strength to appear above earth, being as it were but soft white threads, not changed into the strength of green, because the aire and Sunne hath not yet lookt upon it.

To begin then with the first enemies of corn or grain, after it is thrown into the earth, there is none more noysome then *Crows*, *Pidgeons*, and *Crows*, and *Choughes* and other smaller birds, which flocking *Birds.* after the seeds man will in a manner devour and gather up the grain as fast as it is sown: for as according to the old saying *Many hands make light work*, so many of their mouths (being creatures that ever flye in flocks together) and their much crueltie in devouring, soon rob the earth of her store, and deprive the labouring Husbandman of very much profit, and the Grain which these creatures do most consume, is all manner of white Corn, as Wheat of all kinds, Rye and Oats, also H.ripe-seed, Lin-seed, Rape seed, and such like: Neither are they only offensive during this time of sowing, but after it is sown and covered, digging it with their strong bills out of the earth, and so making the waste greater and greater.

The prevention or cure of this evill, is divers, as the assistance of people, and custome of Countries do instruct them: for some

The Cure

some

some (especially the *French-men*) use when they sow these graine and seeds, first to sprinkle it with the drags or lees of their bitterest oyles, which when these devouring fowles do taste they refuse to do any further hurt : others use to sow Pigeons dung or Lime with their seed, which sticking unto the graine, the unfavorineffe thereof will make the fowl cast up the graine, a gain, and leave to do further hurt. But forasmuch as these medicines cannot ever be had, nor are ever wholsome for every ground, the onely best and safest meanes to prevent this evil, is to have ever some young boy, with bow and arrowes to follow the seeds-man and Harrowes, making a great noise and acclamation, and shooting his arrowes where he shall see these devourers leight, not ceasing, but chasing them from the Land, and not suffering them at any time to leight upon the same, and these servants are called Field-keepers, or Crow keepers, being of no lesse use and profit (for the time) then any other servants whatsoever. Nor is it sufficient to have the Field-keepers for the bare time of seed only, whilst the grain is in sowing, but he shall also maintain them untill such time as you see the grain appear above the earth, which for Wheat or Rye, because they are winter seeds, and so longer in sprouting, will aske a full month ; for all other seeds which are sown in the Spring or Summer, a fortnight is full sufficient : and this Field-keeper shall not fail to be in the field an hour before Sun in the morning, and so continue till half an hour after Sun set in the evening, for at the rising and setting of the Sun is ever done the greatest mischief, for then are all creatures most eager and hungry ; and though the indurance may promise much pain and trouble, yet questionlesse the labour to any free spirit, is both easie, and pleasant.

Additions.

Also if your Field-keeper, instead of his bow and arrowes, do use to shoot off a musket, or Harquebush the report thereof will appear more terrible to these enemies of Corne, and the profit thereof will be a great deal more : for a shot or two of powder will save more Corn, then a weeks whooping and shouting, onely you must observe, that your field-keeper use no bullet or hail shot, for so he may turne scaring to killing. Now touching the destruction which these creatures make of Corn after it

is stackt up by tearing off the thatch, and digging holes and pits therein ; to prevent that, you shall cause the thatcher to scatter upon the thatch, great store of ashes of any kind, or else Lime, that as the Pidgeons or Crows teare up the straw, the Lime or ashes will sparkle into their eyes and nares, which they will not indure ; as for those parts of the stack which cannot be thatcht, as the sides and ends ; upon them you shall prick divers scare-crows, as dead crows, or dead Pidgeons, or any other rags, or the shape of a man, made either of thumb ropes of hay or straw, or else some old cast away apparrell, stopt with straw, & so fixed on the stack, also in this case you may use Clap-mills, or such like toys, which make a great noise. But to conclud, the best prevention for these creatures (if you want ability to maintain a field keeper) is to take long lines of pack thread, and in them to knit divers feathers of divers colours, especially white ones, and with little stakes so fasten them over the Corn, that with every breath of wind the feathers may dance and turn about, and the nearer that these blinks or scares come to the ground (when the corn is new sown) so much the better it is, least the fowl, finding away to creep under them begin not to respect them; so that a hand or two from the ground is sufficient, Provided that the feathers and scares have liberty to play and move.

But if it be to save Corn in ripening, that is to say a little before it be reapt, when the eares begin to harden, or when it lyeth in single sheafe upon the land, for then fowl and birds do as great mischief, as at any other season, it shall then be fit that you raise these lines or scares upon higher stakes, so as they may play as much above the eares of corn, as before they did above the earth: and among these scares thus made upon lines in sundry parts of the field, you shall upon other stakes place many other bigger scares, as dead Crows, Pies, Gleads, Pidgeons, or such like, as also the proportion of a man formerly shewed you, or any rags of cloath being black, fowl, and ugly, like bakers malkins; and than this, there is no safer way for the defence of grain, or corn, from these birds, and such like.

The next great devourers or consumers of grain are Pismires Of Pismires. or Ants, which although it be but a little creature, yet it is so labourfom, that the grain which they carry away or destroy by eating, amounteth to a great quantity, and the mischief which

these little vermined do, after the Corn is covered in the ground, and before it sprout, for they creeping in at the little chinks of the earth, and finding the Corn, either drag it out, or eat it, so that it cannot grow, and the grain which they most hurt is all manner of white corn, especially your finest and smallest Wheat, for the skin or hull is thinnest, and the kernel whitest and sweetest: also to barley they do much hurt, especially that which is fullest and best; likewise to Rye, Hemp seed, Lin-seed, and Rape-seed; as for Oates, because it is double hulled, and also your great whole straw wheat, and polard wheat, which is thick hulled, their hurt is not so much to them, and unto pulse nothing at all, because they are too heavy, too thick skinned, and too bitter in taste.

The Cure.

The best cure and prevention for these Pismires is to search your corn fields well especially under hedges and old trees, and on the top of Moal-hills, and if you find any beds or hills of ants or Pismires, presently after sun setting, with hot scalding water to drown the beds or hills, or with wet straw and fire, to make such a smoak upon them, as may smother them to death: also if your manure your corn lands with ashes, lime, or salt sand, you shall be well assured it will never breed Pismires.

Of Dores.

Next unto these, your Dores or great black Clocks are vehement destroyers of all kind of Corn, both white corn and Pulse whilst it lyeth dry on the earth, and before it sprout; for after it beginneth to sprout, they do no more touch it and these Dores destroy it in the same manner, as the Pismires do, by creeping in at the small crevices of the earth, and finding the grain, do as long as it is dry feed thereon, and though they are no hoorders, or gatheres together of the grain, keeping it in heaps in dry places as the Pismires and other vermine do, yet they are great feeders thereon, and that continually: besides, they will ever chuse out the fullest and best corn and leave the leaner whereby they do the Husbandman double injury; as first to devour, and then to devour but the best only.

The Cure.

The cure or prevention for these Dores, or black Clocks, is in seed-time to make great smoaks in your Corn-fields, which will presently chase them from thence, for they are the greatest enemies that may be to all manner of smoak: but if that be not sufficient

ufficient, then immediately before you sow your Corn, you shall very lightly sow your Land with sharp Lime, and whensoever the Dore shall find or taste the smell or taste thereof, presently he will depart; or if he eateth of the grain that toucheth the Lime, it is as Present poyson unto him, and there he dyeth.

After these, your field Rats and Mice are very vehement destroy-
 Of field Rats
 ers of all manner of grain or Seeds before they sprout, especially and Mice.
 all sorts of wheat, and all sorts of pulse, because for the most part those kind of grains in many soyles are sown under furrowes and not harrowed, so that the furrows at first lying a little hollow, these Vermine getting in between the earth and then, will not only devour and eat a great part of the grain, but also gather together great heaps thereof into their nests, as is often seen when at any time there nests are found, some having more, some lesse, according to their labours.

And albeit in other soyles where the grain is sown above furrow, and so harrowed in, and laid much more close and safe, they cannot do so much hurt as in the former, yet even with these they will with their feet digge out the Corn in great abundance, and though in lesse measure, yet do hurt that is unsufferable; so that to conclude, neither Rye, Barley, Oates, nor any other smaller and more tenderer seeds, are free from their annoyance and destruction.

Now the cure and prevention for these Field Rats, or Mice. The Cure.
 are divers according to the opinions of divers Authors and divers of our best experienced Husbandmen: for some use in the Dog dayes, or Canicular dayes, when the Fields are commonly bare, to search out the holes and nests of these Rats and Mice, which are easily known. being little round holes in the earth, made so round and artificially as if they were made within an *hour* no bigger then the body of the creature that was to lye in it, and into these holes they use to put a few *Hemlock seeds*, of which when the beasts tastes it is present death unto them: Others use to sprinkle upon the land *Hellebor*, or needling powder mixt with Barley meal, of which the Mice and Rats will greedily feed, and it is a deadly bane and present death unto them.

Lastly (and which is the best medicine) if you take a good quantity of ordinary green glass, beaten also to powder, and as much

Copperas or Vitriol beaten also to powder, and mixe them with coorse honey, till it come to a paste, and then lay it in the holes, and most suspicious places and it will neither leave Rat nor Mouſe about all your fields, but suddainly destroy them.

Of Worms.

The next great destroyers of Corn and Grain, are *Wormes*, and they destroy it in the sprouting, then when the ground hath rotted it, and the white or milke substance breaking open the upper husk, shooteth forth in little white threads at both end, upon which whilst it is so moist and tender, the worm feedeth extream, and so devouring up the substance or sperme, is the cause the corn cannot grow or get out of the ground, and these *wormes* being as it were the main citizens within the earth, are so innumerable, that the losse which is bred by them is infinite.

The Cure.

Now the cure or prevention for these Wormes is diversly taken: for some Husbandmen use but onely to strike into the Plow-*Rest*, and under the lowest edge of the shebord certain crooked spikes of iron of great nailes half driven in, and turned back again, with which as the Plow runs tearing in the ground, and turns up the furrow, those pieces of Iron kill and tear in pieces such Wormes as are either within or under the furrow that the Plow casts up, and this is sure a very good Husbandly Practice, but not sufficient for the destroying of such a secret hurtfull vermine which is so innumerable, and lyes so much concealed; therefore, more curious Husbands use besides this help of the Plow, to take Oxe dung and mixe it with straw, and then to burn it up in the land making a great smoak over all the land, immediately before you plow it for seed, and it is thought that this will kill all the worms which lye so high in the earth, as to hurt the Corn.

Others use, before they make either the mixture or the smoake, to wet the straw in strong lye, and then adding it to the dung, the smoak will be so much the stronger, and the worms kill'd the sooner; or if you sprinkle strong Lye upon your seed before you sow it, there is not any worm that will touch the grain after: also, if you take hemp and boyl it in water, and with the water sprinkle your seed before you sow it, not any worm will come neer to touch it.

Of Rye not
to be wet.

Yet is it to be observed in this rule of wetting your seed corn,
that

that by no means you must wet your seed Rye, for it is a Grain so warm and tender that it will neither indure cold, wet, nor stiff ground insomuch that the Plow-man hath a Proverb, that Rye well d'own'd in the Hopper; that is to say, it must neither be sown on wet ground, nor in a wet day, since present showres are apt to destroy:

Lastly, it is thought that oft plowing your ground in the wane of the Moon is a very good means to destroy both.

Touching that practice which many use, to gather the wormes from their lands at Sun rise, in bright dewie morning and Sun-set when the worms couple above the earth, I hold it more fit for small Gardens, then large Corn fields.

The next great destroyers of Corn are Snailles, and they destroy it after it is sprouted, feeding upon the tender white threads and fions which start from the seed and would rise above the earth being the stem or stalk on which the eares should grow (were it not devoured and eaten up by the Snailles, and such like Vermin) as soon as it begins to peep up, or as it were to open the earth: whereby it is driven back and forced to dye in the earth: for these creatures sucking up the tender sweetnesse, deprive it both of life, and nourishment.

The cure and prevention for this evil, is to take the soot of a Chimney, and after your Corne hath bene sown a weeke or ten dayes, or within two or three dayes after the first showre of Rain which shall fall after the Corn is sown; you shall sow this soot of the Chimney thinly over the Land, and not a Snaille will indure to come thereon: Others use (especially in *France* and those more fertile Countries) to take common oyl lees. and after the Corn had been sown and is ready to appear above the ground, to sprinkle it all over the lands, by which meanes no Snaille or such like Creature will indure to come neere the time.

The next great destroyer of Corn is accounted the Grasshopper, and he also destroyeth it after it is sprouted, and appeareth above ground, as the Snail doth, but somewhat more greedily, for he not only feedeth on the tender white strings, but upon the green leaves that appear also; by which meanes the Corne is not able to spring or bring forth a stemme or stalke to beare

the ear upon; or if it do put forth any, yet it is so small, weak and wretched, that the ear growing on the same, is withered and lean, and the grain dry and blasted, and no better than chaff: nor is there any corn that escapeth the destruction of the Grasshopper, for he generally feedeth on all: first on Wheat and Rye, because they are the earliest then on the Barly and Oats, and lastly on pulse, upon whose lease, and blossome he feedeth, whilst the first is sweet and pleasant, or the other green.

The cure.

Now the cure or prevention for these creatures, is according to the opinion of some Husbandmen, to take Worm-wood, and boyl it well in water, til the strength of the Worm-wood be gone thereinto, and then with that water, in the month of May, to springle all your Corn over when the Sun is rising or setting: and not any Grasshopper will come neer, or annoy the same. Others use instead of Worm-wood to boyl Centaury and to use the water thereof in the same manner as aforesaid, and find an equal and right profit in the same: but it is most certain that any bitter concoction whatsoever used and applyed as aforesaid, will not leave any Grasshopper about your field; for any bitterness is such an enemy unto them, that they cannot live where they feel any taste thereof.

Of Moles.

The last offence of living creatures belonging to corn or grain are Moals, which not only feed upon it after it is sponged, and spindled, by eating up the roots thereof, & so consequently by killing the whole corn: but also by their digging and undermining of the earth, do roote up the corn and destroy it in most wonderful manner, for where they make their haunts, or are suffered to digge, there they will destroy almost half an acre in a day: neither make they choice either of grounds or grain, for all grounds and grains are alike if the ground be not too wet or subject to inundations, or over-flower (as for the most part corn grounds are not) for above all things Moals cannot indure wet ground, or earth of too moist a quality.

The Cure.

Now the best cure or prevention against these creatures, is to find out the trenches and passages, which are most plain and easy to be known by the turning up of the new earth, and digging crosse holes in the same, to watch either the going forth, or the coming back of the Moale and when you see her cast, to strike

h.r., with an iron fork made of many graines, as eight or fix at the leaſt, and ſo to kill and deſtroy them, which is ſo generally known amongſt Husbandmen, that it is become a trade and occupation among them, ſo that it needs no further deſcription ; and the rather, in as much as for three or four pence a ſcore, you may have any ground cleanſed of Moals whatſoever..

Now there be ſome others which have not this art of killing or catching of Moales, which only do take brimſtone and wet ſtinking ſtraw, or any thing elſe that will make a ſtinking ſmoak, and putting fire thereto, ſmoak all the places of their haunts, and by that means drive them all cleau away from the corn lands : many other praſiſes they have, but none ſo good, certain, and probable as theſe already declared.

Thus far I have ſpoken of thoſe offences which proceed from living creatures, I will not intreat of thoſe which come and grow from the influence of the Heavens, being malignant vapours which ſtriking into the earth, doe alter the ſweet and pleaſant nourishment thereof, and change it into bitterneſſe and rottenneſſe, whereby the corn is either ſlain out-right, withered and made lean and unkindly, or elſe the kernel turnes to a filthy blackneſſe, being bitter, dry and duſty, like unto ſmoake, which the Husbandmen call ſmuttineſſe, or mildew. It commeth alſo another way, as namely by overrankneſſe, or too much fatneſſe of the earth, and this hapneth moſt commonly onely to Wheat, for if blackneſſe happen to any other grain, it commeth of blaſtings, or other malice of the Stars for rankneſſe of the ground is in Barley, Rye, or Oat onely, makee them lye flat to the ground the ſtalke not being able to ſupport the multiplicity of the eares, and ſo by that meanes the graine wanting his true nourishment, grows withered, and of no validity ; now that this is moſt eaſie to be found out, the rankneſſe of the growing corn riſing as it were in cloſe bundles together, and the deep blackneſſe of the green blade will with ſmall travel ſhew you.

This to cure and prevent, it ſhall be good before you ſow your Grain, to ſow your land lightly over with chalk, for that will abate his over-rankneſſe.

There be other malignant qualities which proceed from the influences of the Heavens, or rather from the qualities of the Planets

Planets or Elements, which do many dangerous hurts unto Corn, as namely the Hail, the Lightning, the thunder, or the Planet-struck, or blasting, for all which the ancient Husbandmen have suggested severall Cures : As namely for the Haile, to plant the White-vine, or stick the branches thereof in the Corn field : for the Lightning, to close a Hedge Toade in an earthen Pot and burying her in the corn Field, or to plant or hang up the feathers of an Eagle, or a Seal skin, or to Lawrell therein : for the Thunder to Ring Bells, to shoot off great Ordinance, or to burn stinking weeds in the Come Field : And for Blasting, to take the fair horn of an Oxe, and mixing it with dung, to burn it in the Corn Field, or to take the branches of the Bay tree, and to plant them in the Come-Field : but in as much as all these, and many other the like smell rather of Conjurat[i]on, Charme, or Exorcism, then of any probability of truth ; I will neither here stand much upon them, nor perswade any man to give further credit unto them, than as to the vapours of mens brains, which do produce much, many times out of meer imagination ; and so I will proceed unto those things which are of far greater likelihood.

Of Frosts,

The next evill which hapneth unto Corn or Grain, is that which cometh by frosts and sharp nipping colds, which starving the root, and binding up all nourishment, maketh the Corn dry, wither, and never prosper ; and, than the violence of the frosts there is nothing more bitter to plants and seeds, For, even Raifor like it cutteth the veins and sinews in pieces, and as sharp needles pricketh the heart of every growing thing : for as the fire which is most hot, when it rageth, burneth, and consumeth all things ; so the frost, which is most cold when it continueth, starveth and choaketh, or stiflith whatsoever it embraceth.

The Cure.

Now the cure or prevention for those evils which do happen to grain by these great frosts, is as some Husbandmen suppose, to cover the Land over when it is sown with ashes : others spread straw or rotten litter upon their Corn and not any of them but is sufficient to prevent the worst injury that frost can do.

Mists and
Foggs.

The most malignant quality which offendeth grain, is mist
and

and fog : which being naughty vapours drawn from the infected parts of the Earth, and fall upon the Corn, do not onely make the grain leprous, but also infecting the better earth after the kindly nourishment thereof, and as it were distilling corruption in the veins, makes all that depends thereupon most leprous and unwholsome, and thereby altereth the quality quite turning sweetnesse into bitternesse, fushesse into emptinesse, and goodnesse into badnesse, to the great losse of the Husbandmen, and the much disreputation of the ground.

Now the cure and prevention of this evill, according to the The cure. opinions of all the best Husbandmen, is to take weeds green, the twigs of bramble, and other brush wood, wet straw or such like stuffe, and binding them up in great bundles, to put fire thereto, making a great and violent smoake, and then taking the advantage of the wind, to walke up and down the field and smoake it, which is thought a certain remedy to take away those inconveniencies which happen by the venome and poyson of these mists and fogs.

Now to conclude, of the diseases and infirmities which happen Corn reape to corn whilst it is in the field, there is not any formerly spoken wet, smothered, dangerous, or of vilder quality then the reaping, mowing, or gathering in of Corn, wet, or too green, and unhardned : for such moysture, when the corn is sheaved up close together, or stacked or mowed up, forthwith gathereth heat, and either seareth the Corn on fire, or else the moysture being of lesse quantity, and not apt to flame, yet it corrupteth the grain and straw, & breedeth a stinking mouldinesse or rottennesse about it: so that the grain either becomes dung or dirt, or at least so stinking and unsavory, that it is good for no use or purpose, as is dayly seene where carelesse Husbonds gather in their grain without respect or government, making the old proverb good, That haste ever brings waste.

The cure and prevention of this evill, is the well-husbanding The Cure. and managing of the harvest, as first with a careful and well judging eye to look upon your corn, and to know by the hanging downward of the eare, looking as it were back to the ground and by the hardnesse of the grain, whether it be ripe or no; then to look into the cleannesse of the corn, as whether it

be full of greenesse: as grasse, weeds, and such like : or clare of it self without any mixture : if you find there be any weeds mixt with it, then you may reap it so much the sooner, though the kernell be not so well hardned as you would wish : and above all things have a care never to shear corn in the rain or wet, no not so much as with the mornings or evenings dew upon it, but even in the heat and brightnesse of the day. Then having reapt your corn so full of grasse and weeds, you shall by no means sheafe it, but spreading it thinn in the Sun, let the grasse wither all that day, which when you perceive to change colour and grow drye, then bind it up in sheafes, and let it lye single a day, that the wind and Sun may get into it, and dry the greens more sufficiently ; then lay it in shocks of six or eight sheafes a peece, and in those shocks, turne the eares so inward, that the other bigger ends may defend them from all the rain, wet or dew that may befall upon them : then a day or two after, lay them in shocks of twenty, or of four and twenty sheafes a peece, and in those shocks, let them take a sweat ; then break them open in a bright Sun shine day, and letting the aire passe thorow them, to dry them, forthwith lead the grain home, and house it or stack it in such sort as was shewed in the former Chapter, and be sure the grain thus ordered and dryed can never take hurt : but if the season of the year fall out so extraordinary evill and full of wet, that by no meanes you can get your Corn drye home (which although it be seldome seen, yet it is possible to be seen) in this case you must bring it home as well as you can, and having your Kilne well ordered and bedded, you shall lay as many sheafes thereon, as it can contain, and turning and tossing them over a very gentle fire, by slow degrees dry them very perfectly as near as you can with no greater a heat than that which the Sunne giveth, and then mow and stack them up at your pleasure, for the ayre will sweeten them again, and take away all smell of smoak or other onnoyance : only observe, not to stack them up whilst the fire or heat is in them, but when they are cold, and so they will be as sweet as may be.

washt corn, or the washing of corn : True it is (as before I have written) that all sorts of wheat whatsoever, are subject either by the ranknesse of the ground, blasting or else mildewing, to a kind of filthy footy blacknesse, as is already shewed ; and this footy corn is taken two wayes, generally and particularly : generally, if the whole land be stricken, and no corn saved, but all spoyled, which is called mildewed ; or particularly, where but some certain eares are stricken, or some certain part of the grain, as when it is black at both ends, yet full and sound in the midst, and this is called smatcht corn, being disfigured in part, but not in all. This smatcht corn, which is stricken here and there, if the blasted eares be not culled out from the other, (which to doe is an husbandry exceeding good and very worthy) when it cometh under the stayle, the dust of those black blasted eares will so soil all the rest of the corn, that it will look black and ill favoured, and so become unserviceable and unmarkable. for the blasted corn is both bitter and unwholsome : In this case, you must of force wash this corne, and you must do it in two or three waters, till you see all the blacknesse quite gone ; which done, then drain away your water cleane, and laying the corn on fair window cloaths, or coverlid, lay it in the heat of the Sunne, and so dry it again till it be so hard that it will grind : But if the time of the year will not serve for the Sunnes drying it, then you shall dry it on a Kilne with a very soft and gentle fire, and then cool it in the aire to recover the sweetnesse again, and then the corn is as serviceable as any other : onely for seed it will by no meanes serve, both by meanes of the blasting, which makes the kernell imperfect at both ends where it should sprout, as also the too much drying thereof ; by which it is so much hardned, that the ground hath no strength to resolve it ; therefore it is the Office of every Husbandman when he chuseth his seed corn, to eschew by all meanes this washt corn as a grain that is lost in the earth, and will by no means grow.

Therefore that you may know washt corn from all other To know
 corn, and so not to be deceived by any deceit in the ill Hus- washt corn
 bandman, you shall take it up in your hand, and if the corne
 P 2 look

look bright cleer, and shining, being all of one intire colour, without change or difference, then be sure the corn is unwasht and perfect.

But if you find it look whiter at the ends then in any other part of the corn, and that the whiteneſſe is black and not shining, so that there is a changeable colour in the corn; then be assured that the corn is washt, and then by no means apt for seed or increase.

Again, put three or four grains into your mouth, and chew them, and if then the taste be sweet and pleasant, and grind mellow and gently between your teeth; then is the corn not washt; but if it have a bitterish, or fleshy raw taste, and grind hard between your teeth, or with much roughnesse, then hath the corn been washt, and dried again, and is not good for seed; also when corn is more then ordinarily moyst, or more then ordinarily dry, both are very ill signes, and shew either imperfect corn, or imperfect keeping, for the best and good corn indeed, ever holdeeth an indifferent temperature, betwixt drynesse and moysture.

CHAP. XVIII.

How to keep all manner of grain, either thrashed or unthrashed with least losse the longest time, and how to preserve it from all infirmities, and vermin in the House or Garner.

Keeping of
Corn two-
fold,

TO proceed to the keeping and preserving of corn and grain. it is to be understood, that it is to be done two severall waies that is to say; in the ear and out of the ear: in the stack, when it is cleansed and dressed.

Keeping Corn
in the ear or
in the chaffe;

Touching the keeping of Corn in the Ear or in the Stack, there is no better nor safer way then that already described in the sixteenth Chapter, being free from all offences whatsoever that can come to hurt it.

Now there be others that cut off the eares of their corn, and then put them into great Chests or Hutches of wood (such as are very frequent and much in use in *Ireland*, and other Countries where war rageth) and so keep it sweet and good many years:

Others

Others use to beat it out of the eare, but not separate it from the Chaffe, and then laying a leare of the Straw more then a foot thick, to lay a good thick lear of the thrasht corn; & thus lay lear upon lear, till you have made up your stack, in such proportion as you shall think convenient; and this will keep all kind of corn, or grain, or other seeds, sound, sweet, and fit for any purpose, at least a dozen yeares, or more, as some have supposed, without either too much drying, withering, moistening, or moulding. And sure this is a very excellent way for the storing up of much corn in a very little roomie, and may as well be done with corne as with straw; only it is not to be done in barne nor house, because Mice, Rats, and other kind of vermine will work much destruction thereupon, but on a Sack or Hovell made and proportioned in such form as was shewed before in the sixteenth chapter, and so it will stand safe without all annoyance, as long as it shall please the owner to keep it; sure I am, it will last thus fully twelve years, yet some Authors affirme; it will last fifty years, but that is a space of years beyond my tryall.

Touching the keeping of Corn after it is thrasht and drest, it is divers wayes to be done, as by stowage or place of lear, as Garners, Hutches, and such like, by labour and industry, as with the shovell, or else by device or medicine.

Keeping of
Corn out of
the Eare or
drest.

For Garners, they be made divers wayes, according to the nature of the country, and custome of the people. Of Garners.

Some are made with clay and some troden with hair, straw chopt, and such like: but these are the worst, and do soonest corrupt corn; for although they are warme, which is a great preservation to corn, yet they yeeld dust, and from that dust is bred flies, mites, weavels, and other Vermine which do spoyle corn, and make it easily rot.

Others are made of stone and lime, but they are subject against wet wear, to yeeld forth a moyst dew which corrupteth and roteth corn.

Others are made of Brick and Lime, and they are very good against the weavell, and other small Vermin; but the Lime is sharpe, and so consequently very unwholesome for all manner of Grain.

The best Garner that can be made to keep all manner of grain

in, is made of playster, burnt and brought into mortar, and so raising it up with the help of small stones hidden & placed in the midst of the wall, to make both the inside and outside of the Garner of smooth playster, no stone being seene but hidden at least two finger thick on each side, and all the bottoome also must be made of plaister ; for no floor keepeth corn so well, of what kind soever it be ; and these Garners would be placed as neere as you can to the backs, or sides of chimneyes ; or as neere the aire of the fire as you can conveniently ; for as there is nothing more cold then playster, yet it is ever so dry and free from moysture, that with no change of the air or weather it relenteth, but keepeth the corn ever in one state of goodnesse, whilst the warme standing thereof is such a comfort in the winter, and the naturall coolnesse of the thing so soveraign in Summer, that the graine ever abideth in one state without alteration.

Of Hutches.

Now for hutches, or great chests, bins, dry fats, and such like, they are made of old dry, and well seasoned Oak boards, plain-ed smooth and close joyned and glewed together, with covers and lids made also very close, whereby little or no ayre can come in : some of these great bins, or hutches, made of dry boards, are made open and without covers, but they are not so good, for the ayr cooling the upper part of the corn, and the middle part sweating, breedeth corruption, or mustiness, which hurteth and spoyleth the corn : besides, they are somewhat too warme, and thereby make any green corn apt to corrupt and smell.

Touching the use of Garners and Hutches, they are principally to keep Malt after it is dried, or Barley which is for the use of bread or meal, and here is to be noted, that the best manner of keeping Malt, is to keep it in the corn, that is to say, in the dust and other filth which commeth with it from the kilne, as thus ; when first you lay your malt on the kilne to be dryed, you know there is at one end a certain sprout, or small thred, which growes from the corn, and is called the come, which by the rubbing and drying of the malt falls away, and leaves the come clean, and smug of it self, and when you trim and drasse off your malt for the mill, is winnowed and cleansed away : this you shall preserve and put altogether into your Garner or Hutch.

which

which will so mellow and ripen your malt, that in the spending thereof. A peck will go further; then a peck and a half kept of a contrary fashion, and although some are perswaded that this Come or malt dust, is a great breeder of the worm or weavell, by reason of the much heat thereof, being indeed of the purrest of the heart of the corn; yet it is not so, unlesse some rankness or moisturedo get to the corn; and then it breeds weavels in infinite abundance, and therefore by all means be sure that your Garners, and Hatches, do stand exceeding drye, and then there is no fear of the losse of corn, nor shall you need to dreffe or winnow your malt but as you spend it.

Lastly, here is to be noted, that although I here joyn Garners, Hatches, Chests, and Bins together, yet I make them not all of equall goodness; for the plaister garner is absolutely the best of all, the close hatch or chest next, and the open bin last; yet any, or all, sufficient enough to keep malt, barley, or small seeds, divers yeares without imperfection.

It is written by some of the antientest Authors, that Wheat hath been kept in these close hatches or chests sweet, the space of fifty yeares; yet I hold the rule somewhat doubtfull, both because Wheat of it self, lying so close packt together, is apt to heat and sweate, and that heat commonly turneth to faultinesse, and the sweat to corruption: but that it may thus be preserved from worms, weavells, mites, and other vermine, breeding in corn, it is doubtlesse and infallible.

Now for the preservation of Wheat, which is the most principal grain, of greatest use, and greatest price, and therewith almost tender, and aptest to take hurt, the experiments are diverse, as mens fancies, and practises have found out: for some Husbandmen hold opinions, especially the *French* and *Spanish*, that if you take the lees of common oyle (so it be sweet) and sprinkle it upon your wheat as it lyes, either in the garner, or upon the floor, that it will preserve it from all corruption and annoyance whatsoever, nor doth it preserve Wheat only, but all other manner of grain whatsoever; nor doth it preserve come alone from mischief, but if corn by casualty be tainted or hurt, it doth recover it again, and brings it to the first sweetnesse; and if either wormes or weavels be bred in it, the oyle presently kills

To preserve
Wheat.

kills them, and trees the corn from that mischief : as for smaller seeds, as hemp, flax and rye, this oyl doth not only keep them long and sound, but also feeds and nourishes them, and makes them better, either for the ground, or for use, either in the mill or in medicine.

There be others that use to take chalk, and beat it to powder, and then scatter it amongst their Wheat, when they put it into the Garner, and have found that thereby their graine hath been wonderfully preserved from all imperfection ; and surely there is great reason for the same, because the drynesse of the chalk drinketh up the moisture which sweateth from the grain, and is the first breeder of all putrefaction : also it cool-eth and asswageth the immoderate heat which is ingendred in the Corn, by reason of the packt and close lying together.

Again, there be others which use to lay great store of Worm-wood amongst their Wheat, which likewise preserveth it from all annoyances, especially from Worms and Weavels, as also from Mice, Rats, and such devouring vermines; neither will the Corn corrupt or grow faulty, as long as the Worm-wood remains amongst it. In Italy, the carefull Husbands use to take a certain dry earth or clay, called earth of *Olonthus* or *Ceranthus*, and this earth they beat amongst their Wheat, and then put into the Garner or Hutch, and it will keep it sound and sweet divers years together; then when they have occasion to use it, with small reeing sives to dreffe it from the corn, and so preserve the dust, which will last and serve you many years together, even almost an age, as some have reported, and is at this day to be seen in many parts of Italy and other places.

Again, I have for mine own part seen in the Island of the *Azores*, certain very great large Caves, or pits made under the earth, of the fashion of a *pyramiden* or *pyramide*, that is to say, great and spacious in the midst, and narrow both at the top and bottome, like a brass-pot, or great glass viall, and made as smooth within as may be, and in these caves or pits they first lay chaffe, and then their thrasht Wheat, filling it up full to the top, or within a handfull thereof, which they fill again with Chaffe, and then closing the top with a broad stone, they cover

it over with earth so close and unperceivable, that you may walk or travel over it without any suspicion; and for mine own part, I have my self digged up many of these pits, and found great store of Wheat, both in the high-ways, and other most suspicious places; and surely it is thought, and experience in those places makes it good, that in these caves or pits you may keep wheat as long as you please, as *Pliny* speaketh of, which is an hundred, or an hundred and twenty yeares, without hurt or putrefaction either of heat, moysture, wormies, weavels or any other Vermine whatsoever which consumeth or devoureth Corn; yet how I may recommend this experiment to our Nation, I am uncertain, because the much moysture of our climate, and the cold rawnesse thereof promiseth a contrary effect for the great enemies unto grain, are violent cold and moysture, and with us it is very difficult to make any caverns under the earth but they must be subject unto both: therefore onely to those which live in hot sandy Countries, high and free from springs or waters, or in dry and rocky grounds, where these mines or hollow places may be hewed out, as in a main and firm quarry, I recommend the tryall of this practise, with this assurance that where the ground is fit for that purpose, as in any of your sand grounds or gravell earths, as in *Norfolke, Middlesex, Kent*, and many other sandy climates; or in rocky scituations, as in *Ntingham, Bath, Bristol*, and such like, you may keep your wheat good, sound, firme, and free from all annoyances, even as long as you shall please to keep it, both without putrefaction in it self, or waste made by other devouring wormes and vermin; but if in a more moist place, as in clay or other mixt earth, which ever is vomiting wet and dewish humours, you are forced to approve this experiment; then you must necessarily lyme all your cave or hollow Mine within, at least halfe a foot thick with tyle sherd and plaister laid wall-like together, and then the plaister dawb'd at least three fingers thick above all, and so you may keep your corn as safe and as sound as any hot soyl whatsoever, but without it, your corn will not indure a week without rottenesse, faultinesse, mouldinesse, and stinking.

To conclude, having shewed you all the most approved and best experiments for the keeping and preserving of wheat, there

is none better, or so good as this silly plain one, which I will here deliver : and that is, first, as near as you can, reap your Wheat at the change of the moon ; for wheat which is so reaped, is seldom or never subject to losse or putrefaction (being got in dry, or in husbandly manner ordered and handled) because that celestiall body hath such a power and influence in the growth of corn and seeds, that as she groweth so they grow, and as she waneeth, so they abate and wither.

And truly for my own part, in my poor Husbandry, I have made this observation, that I have reaped corn at the beginning of the wane (to mine eye and judgment) great, full, and bol'd as the plow man calls it, and within few dayes after, when it came to thrashing I have found it most poor, hungry, and small corn : nor could I give or find any other reason for the same, but that it was reaped in an ill and most unseasonable time : for, on the contrary part, I have ever found that corn reaped upon the change, being ripe, full, and every way fit for the same (and the weather fair and dry above head) it hath never altered, but kept his first and perfect goodnesse, so that I cannot chuse, but in this case think the observation of the Moon to be a thing of great effect and validity, appoynted by God as a second means for our help and profit : when therefore your corn is thus seasonably and well got in, you shall thrash it, winnow it, and dresse it so clean as you can ; then carry it up into your chambers or lofts appoynted for that purpose, and whose floors by all means I would wish to be cast of the best plaister; for boards is too hot, and clay is too apt to breed vermine : On this plaister floor you shall spread your wheat, not above a foot thick at the uppermost, and so let it lye, observing once in four or in five dayes at the most, with a large wooden shovell to turn the wheat quite over & over, and thus doing, you shall be sure to keep it as sweet, sound and good, as when it first came into the barn : for neither can the heat, sweat, nor coldnesse offend it, the first being cooled and tempered by the opening and dispersing ; the second dried up by the ayr which hath free recourse into it, and the last comforted by the labour and tossing of the shovell, casting it up and down from one place to another : and though some curiour husbands may object that this manner of keeping corn dryeth it

it somewhat too much and thereby disableth it for some particular purposes, as for seed and such like : yet in that they are much mistaken ; for this stirring and moving of Grain, is not a drying of it, but rather a great comforter and strengthner of it, dispersing backe into the corne, those wholsome vapours which should doe it good (by way of communication and fellowship with the Grain) and expelling those ill humors which sweating out of it would otherwise confound and hurt it, so that in conclusion for the true and long keeping of Wheat sweet, sound, and perfit, without losse or corruption, there is no way more safe or easie, then this last expressed, being of all other the best, although in shew it appear sleight and triviall, as for the most part things of greatest moment in this nature do : but to the judicious Husbandman I refer it, whose aym is at the worth and substance not at the words and curious glosse, set forth in strange ingredients.

Touching the keeping of Rye or Malline, or, as some call it, ^{To preserve} munn-corn, or blend-corn, being part Rye, and part Wheat ^{Rye.} mixed together, that which preserveth Wheat will also preserve it, for they are grains of like nature, onely the Rye is somewhat hotter and dryer, and therefore will endure somewhat more moysture, yet to speak particularly touching the preservation of Rye, there is nothing better then the plaister floor, and oft turning ; the close Hutch is also exceeding good, so is the Pipe or dry fat, but being once opened, and the aire entring into the corn, except it be soon spent, it will soon putrifie, for though in the close keeping, it last long, yet when it comes to the ayre it will quickly receive taint. Lastly, for the profit in keeping of Rye, indeed there is nothing better then to ply it and tread it hard into hard vessels or barrells, wherein salt hath been much lodged, or other brine or salt matter : provide I alwaies that the vessels be sweet and untainted, no wayes subject to faultinesse or other unsavory smells, from which there is no preservation.

Concerning the preservation and keeping of beanes, which ^{To preserve} are indeed a more grosse and fatter Grain then any heretofore ^{Beanes,} written of, and out of the fulnesse of their substance, more subject to moysture and those dankish humors which corrupt corn :

the carefull Husbandman observeth two rules : first, not to thrash any Beanes or Pulse, more then for necessary use (as for the Stable or Mill) before it be middle *March*, at which time the Grain, having taken a kindly sweat in the Mow, Stack, or Hovell, is become so dry, firme, and solid, that no floor, wall, or other place of Leare can make it relent, or give again (except great abuse, and too moist keeping) for it is to be understood, that this sort of Pulse or Grain is of it self so exceeding moist and apt to sweat in the Mow, that all Husbandmen endeavour by no means to house it, or lay it within doores, but seek to make it up in stacks and hovels without doors, not so much that house-room is wanting, as that the benefit of the Sunne, and Aire, which pierceeth through the same, dryeth and ripeneth the corn in such kindly manner, as maketh it as serviceable as any other : and indeed, the first invention of stacks hovels, reeks, and such like, did not spring so much from the want of housing as from the good and profit which the Husbandman found to accrue to this kind of Grain, onely by reason of laying it abroad ; for it is certain, that Beanes and Pease neither grow together, nor ripen together, but put forth their increase one after another ; for you shall see upon one stalke, bloomes, swads, and ripe eods : so likewise in the gathering of Pulse (when it is reaped from the ground) you shall see some dry and withered, some ripe, some halfe ripe, some absolutely greene, and as but now in growing.

Now all these must be reapt together, and if you stay them in the field till all be of like drynesse, questionlesse the oldest will shake and shed upon the ground before the youngest be ripened, and what that losse will redound to, every Husbandman can judge : So also to house and mow up in a close mow, the dry pulse with the green, surely the green cannot chuse but inflame ; and heat the dry, and the dry so heated to give fire to the green, till both be either rotted or consumed : and hence it came, that expert Husbandmen devised to lay their pulse, for the most part, ever without doors, in stacks, reeks, and hovels, that the sun and wind passing thorow them, might bring all the grain to an equall drynesse and hardness.

Again, Pulse being of all grain the coarcest and fullest of substance

stance in it self, and the straw ever big and substantiall, and full of broad thick leaves, ever moyst and sappy ; it must needs follow that this grain must ever be most apt to sweate in the mow, and so necessarily craveth the greatest store of aire, and the longest time in drying ; so that to return to my first purpose, it must needs follow, that no Beanes or Pease can be ripe or seasoned in the mow, till it be mid *March* at least ; for it is an old saying, among the best husbands, *That a March wind is sale which seasoneth all Pulse* : And if use or necessity compel men to thrash their Pulse before that time, the grain is so imperfect, that it must be kiln dried, or else it is fit neither for the use of bread nor provender,

Now herein is to be understood, that Pease or Beanes which are kiln-dried, may be kept sound, sweet, and good, either on plaister-floores, boarded-floores, or earthy-floores, the space of many years, without turning, or tossing ; nor need you to respect how thick the heap lye, since beanes after they are once dried on the kiln, or in the Sunne, never after will thaw, give again or relent, but remain in their first soundnesse : But if you preserve your Beanes for other uses, as to boyl in your pot, and feed your servants withall as is used in *Somersetshire*, and many other Westernly parts of this Kingdome, then it shall be good for you to take oyl-barrels, oyl cask that is sweet, and fill Calk them all over within and without with ashes, and then put your beanes therein, and close up the heads, and as is used by divers great authors of Husbandry, it will keep sound, sweet, and good, twenty yeares : nay, some give instances of Beanes which have been thus kept and preserved the space of one hundred and twenty yeares ; and surely I am perswaded that if Beanes be well and dry got, and threasht at a seasonable time of the year, as in *March April*, that thus kept, they will last the utmost of a mans pleasure.

Now for the keeping or preserving of Pease or Fetches, which of all other Grain whatsoever, is most subject to rotnenesse and imperfection, because out of its own nature it is apt to breed wormes, weavells, and mites, by reason of the much softnesse and sweetnesse of the kernel of the Grain ; you shall in all things observe the same courses that you do with your

Preserving of
Pease or
Fetches.

Beanes, both touching your gathering, drying, stacking, and also thrashing ; for as they are most apt to go together, being near of nature and condition one to the other, so it is fit that you doe apply unto them one and the self same medicine or remedy.

And herein is to be noted, that as pease are of more generall use then beanes, as for Horse Provender, feeding of Swine, Pidgeons, Pullen, and such like ; as also for bread, pottage, to boyle with or without meat ; for certainly, it is a most wholesome and strong food, as may be seen by the people of *Devenshire, Cornwall, and Somersetshire*, of whose great strength of body not any reason can be given more probably then their much feeding on this graine, and their acquaintance with much and strong labour : So they ought with more care and circumspection to be preserved from all those annoyances that naturally are apt to hurt them, as wormes, rottennesse, mould, mustinesse, and such like.

And first, there is nothing better for the long and well keeping of Pease, then the very well drying of them, either in the Sun, or on the Kiln, especially those which you use for bread, provender, or feeding of swine : and although some Husbands use to feed swine with undryed Pease, nay many times both undryed and undrest that is to say, the Pulse or Chaffe not taken away ; and are of opinion that the Grain so given, sooner feedeth and fatteth up Swine then the other, yet they are deceived : for albeit it swell and puff up a beast, yet is the flesh and fat neither so good, sound, and long lasting, as that which is gotten with dry food, nor doth it make a Swine so thirsty ; and the Husbandman is ever assured, that when his Swine drinks not well, he feeds not well : therefore what Pease you keep for bread, or feeding of Cattell, by all means dry them well, and lay them either in Garners or Floores, and they will last sound and good without breeding worms or weavel, as long time as you please. But those which you keep for food at your own table, as in pottage or other uses, must by no meanes be too much dryed, because then they take a double time in boyling, and spend a double quantity of fuel in their preparing.

Some use after they be clean thrasht and dress, to lay them in a cool close Garner, either of Plaister, Earth, or boords, of which Plaister is the best ; as for any thing that relenteeth or yeeldeth moysture, as lime, stone-walls, or such like, it is most hurtfull, and immediately maketh pease mould and rot : also it is good to lay your pease in thick heapes in your Garner, for that will preserve them moyst the longer time: but to spread them thin upon the flowre, by which meanes the Sun, Ayr, and wind may passe thorow them, is not so good, for it dryeth them too sore, and taketh from them much of their sweetenesse and goodnesse, which ought most carefully to be preserved. There be others which preserve these tender meat Pease by thrashing them up, and then letting them lye in their own pulse or chaffe, and not dressing them, but as they have occasion to use them ; and questionlesse this is a very good and laudable way ; for the pulse and chaffe doth maintaine them sweete and moyst, and yet keepeth them withall so warme and comfortable, that they last much longer, then any other way whatsover ; and in this manner of preserving pease is to be noted, that by all meanes you must let them lye upon a dry earthen floore, so long as they are in the chaff, rather than on the boord, or on plaister, and yet in this case the boords are better then plaister.

Lastly, and which indeed is the best experiment of all other, if you intend to keep pease any extraordinary long time, you shall take barrells or dry Casks, well and strongly bound, and pitch them within exceeding well, with the best pitch or bitumen that you can get ; and then sprinkle the pitch all over with strong vinegar ; then take your pease, being clean and well dress, and put them into the barrells, pressing them down close and hard ; then head up the barrells, and let them stand dry and coole, and they will preserve your pease sound, sweete, and good for any use whatsoever, as long as you please, be it for ten, twenty, or thirty yeares, according to the opinions of ancient Husbandmen ; and other provant Masters, that have lived and commanded in Towns besieged, and Towns of Garrison ; neither shall any worm, mite, or weavel, ever breed in it, or offend it : nay if any have in former

time been bred in them, this manner of keeping the grain killeth them, and destroyeth them for ever.

Preserving of
Lentils or
Lupins.

Now there is another sort of Pulse which are called Lentils or Lupins, which albeit they are not so generally used for the food and sustentance of man, yet they are for Horse, Swine, and other cattle as much in request as any grain whatsoever, and indeed doe feed fatter, and sooner than other ordinary pulse and the flesh so fed is sweeter and pleasanter both to the eye and to the taste, then that which is fed with Beanes or Pease; also they are a Pulse very Physicall and good for many medicines, as may appear by the works of many learned Physicians; and these the longer they are kept, the better they are, and fuller of profit. To preserve them then in good and sound estate, it is meet to reape them in very fair weather, and to stack them up exceeding dry, and if they be laid in the barne, or any close house, it is not amiss; for they will indure bousing better then any other pulse, yet the sooner you beat them out of the straw, or thrash them up, the better it is; for Husbandmen suppose there is no greater hurt to this kind of graine, then the long keeping it in the straw; for it is of such ranknesse, that the very straw, and cods breed in it much putrefaction; and I my self observed both in *Spain*, and in the neighbouring Islands, where is great abundance of this kind of grain, that they do no sooner gather it and bring it home, but immediately they thrash it; nay, some thrash it in the fields upon the lands where it growes, and so bring it home, then spread it on fair boarded floores in very great heaps, or else lay it up in close hutches, or byns, such as wheat and other white grain is to be kept in. If you dry this kind of pulse in the Sun, or upon a kiln, with a very moderate and soft fire, and then lay it up either in a close Garner, or close hutch, it will last many years sound, good, and without corruption. There be other husbandmen which mixe with this grain when it is thrasht, a half part of hot, dry, white sand, or at least cover the whole heap of pulse with the sand, and doe find that it keeps the grain very sound and good many years together. But to conclude, if you take strong vinegar, and a good quantity of *Laserpitium*, dissolve and mixe them very well together, and then having laid your Lentils or Lupins together on

a six boarded floor, in large, broad, and flat heaps, about two foot, or two foot and a half thick; with the vinegar and *L. asperpi-* sprinkled over all the heap, and not any change of weather frosts, wormes, or other vermine shall do them hurt, but they shall remain sound and good as many years as you please to keep them: there are other Husbandmen that instead of this be- Frenched, take only sweet oyl, and sprinkle it all over the Grain, and find the same vertue and effect, for neither wormes nor other vermine will touch it, nor will the radicall humour thereof at any time waste or decay, but remain strong, full, and sound, without any kind of diminishing, nor shall you find any abatement of it, or shrinking in the measure, but that which was a bushell this year will be also a bushell the next year, and as many yeares after as you please, which is no small profit to the owner.

Whereas on the contrary part, if the grain be either dried in the Sun, on the kiln, or by the wind, you shall hardly have of every such bushell so dried, three pecks and a halfe againe, which is by computation at every quarter, which is eight bushells, full one bushell lost, and yet this pulse thus preserved, as be- Frenched, shall be as good for any use whatsoever; fit for such corn to be employed in, as any other dried grain whatsoever, and yeld as much every way, & altogether as good meal, and as good meat.

Now touching the preserving and keeping of Oates, it is to Preserving of Oates. be understood that of all grain it is least casuall, because of it selfe naturally it breedeth no evill vermine, and is again preserved and defended with a double husk, whereby neither cold, moysture, heat, nor drynesse, is able so soon to pierce and hurt it as other grains, which are more thin clad and tender; yet because it is of great and necessary use both for cattel and pallen, and that neither the husband nor housewife can well keep house without it, you shall know, that the best way to preserve it longest, is, after it is reaped, to dry it well either in the Sun or on the Kiln, and then to put it into a close Garner, or close Cask, and it will keep any years sound and sweet.

To chuse the preserving of Oat meal, which is the inner kernel of the Oate, and a grain of most speciall use in the Hus-
R
band

band mans house, as in his pottage, in his puddings, and in many other meates necessarily used for the labouring man; it is an experiment not all together so curious as any of the rest formerly written of, for no Oat-meal can be made, but the Oates must be exceedingly well kiln dried, or else the kernel will not part from the Hull and being dried, as is fit, that drying is sufficient to keep and preserve the Oat-meal divers years.

Provided ever, that presently after the making of your Oat-meal, you put it into dry close cask, or dry close garner (but cask is better) and so that it may remain exceeding dry (for any thaw or moisture corrupts it) and as near as you can let it have (if it be possible) some ayre of the fire; for the warmer it stands, the better and longer it will last, as experience sheweth.

Preserving of
any meal.

For the preserving and long keeping of any sort of meal, there is no better way then first to bould and searse him from his bran for the bran is very apt to corrode and putrifie the meal. and to bring it to a faultinesse or mustinesse: then into very sweet and clean drye caske close and well bound, tread in your meal so hard as you can possibly tread it, and then head it up close and so you may keep it either by land or water so long as you please, and when you have any occasion to spent of it, be sure to loosen no more of the meal than you presently use, for the faster and closer the meal lyeth together, the longer and sweeter it will last, for it is the gathering of the air that only corrupts it.

And here is also to be noted, that you should not presently as soon as your meal is ground, bould it from the bran, but rather let it lye a week or fortnight in the bran, in some close bin or trough, and then after that time bould or searse it, and you shall find it to afford you in every bushell, more meal by at least half a peck then if you should presently bould it as soon as it comes from the mill; whence it proceeds, that the cunning and skillfull Baker will ever have a week or fortnights provision of meal before hand, which lying so long in the bran, payes double interest for the continuance.

Now if it fall out so, that either by trade or merchandise, or other occasions, you buy any meal by way of transportation which is caskt up (as much meal is sold by the barrel) you shall presently as soon as you have bought it (if it be for your own use

use or expanſe) break open their heads, and empty the meale upon ſair ſheets on a clean floore, and then ſpreading it abroad, let the Sun and Aire paſſe thorough it, which will dry up the ſweat, and if there be any taint of ſuſtineſſe, take it away, and bring the meal to his firſt ſweetneſſe, and then immediately boule out the coorſe bran, and after, as was before declared, tread it hard into freſh and ſweet caſk ; and thus you may keep your proviſion of meal all the year long : nay, if need require, two or three yeares, for after the firſt ſweat is taken away, and kindly cryed, there is no doubt to be made of any that ſhall follow after.

Laſtly, touching the preſervation and keeping of all manner of Preserving of
all ſmal ſeeds. freſh ſeeds of what nature or quality ſoever they be, whether Hemp, Lime, Rape, Muſtard-Seed, or any other Garden Seeds whatſoever, though truly and properly they laſt but one year e, yet are fit for ſeed or Increate after that date expired : yet in as much as they are mediceinable after, and a much longer time ; therefore you ſhall underſtand that the beſt way to keep them ſafe and ſound, and fitteſt for uſe and profit, is firſt to gather them as ſoon as you perceive them to be ripe, and the weather being bright, clear and dry, then you ſhall dry and wither them in the ſhade, and not in the ſunne, eſpecially upon a pl ſtored ſtore, where the light looketh to the ſouth, and be ſure that as little ſun and moiſture come to them as you can, for both are main enemies ; which done, bind them up in bundles without thrashing, and ſo hang them up, and keep them in their own ſtods, and they will laſt for all uſes, a full year, and for ſome particular uſes two or three yeares, and in this manner you may alſo preſerve all manner of herbs, weeds, floors, roots, and the barks and kinds of all manner of trees.

CHAP. XVIII.

How to keep Grain, either for transportation by Sea, or for uſe in a Town of Warre or Garriſon, from one year to one hundred and twenty.

TO ſpeak of the Graines and pulſes which are meeteſt for the Sea, and their ſeverall uſes.

The use of
grain and
pulse at Sea.
Of Rice and
the Use.

It is to be understood, that the best and principallest Grain which is indeed both most sweet, most fresh, most pleasant in taste, and most long lasting is Rice, which al though it grow not much in our Kingdome, but that we are bounden to our good Neighbours for the trade thereof, yet it is in such plenty where wee fetch it, that wee need neither complain of the scarcity nor the cost, and so much rather in that a peck thereof will go further than a bushel of any other Grain : Of this Rice is made many good and wholesome dishes, some thick some thinne, some baked, some boyled, as thus : If you take a quarter of a pound of Rice, and boyl it in a pottle of water, till it come unto an indifferent thicknesse, and then put into it a good lump of potted or barrellled butter, and as much sugar as shall saltwise season it to an indifferent sweetness, it is a dish of meate meet for an Emperour at Sea, wholesome, good, and light of digestion, and will be as much as four reasonable men can well eat at a meal ; for the nature of the Rice is such that it will swell in boyling, and grow to that bignesse, that in an instant it will thicken a pottle ; some use the night before they boyl it, to steep it in so much water, as will onely cover the Rice all over, and then the next day boyl it in a pottle of water or more, and the Rice so steeped will so swell, that all the first water will be drunk up, and a great deal of lesse boyling will serve to make it ready ; and sure, then this a man cannot find a cheaper way to feed men, since one pinte of water, and the fourth part of a quarter of a pound of Rice (which come not to above half a penny at the dearest reckoning) is a meal sufficient for a mans eating, having Bisket and Drink proportionably. And this dish of meat being thus thin boyled, is called Sea-Lob lolly, and after salt feeding is wondrous wholesome and comfortable to any man, whether he be sick, found or diseased, and both abateth infirmities, and hastneth the healing of all wounds.

There be others, that after they have steeped this Rice (as afore said) doe then boyl it in like manner, till it be so thick that a spoon may stand upright in it, and no liquidnesse of the water perceived ; then put a good lump of butter into it, and boyl it with it, and stirre it about, and it will make it come much clean out of the pot in which it is boyled ; then season it with

Sugar

Sugar, and a little Cynanon, and it will be a dith of meat right good and delicate, and meet for any man of what quality soever, that is worth goodnesse or preserving ; nor need the quantity exceed the proportion already prescribed.

Again, if you have meale in the ship, if you take of this Rice steeped in water, & a little lightly boyled & seasoned with Sugar, Cinnamon, and Ginger, and a good quantity of Barter, and then bake it in little pasties, you shall find it a most delicate, pleasant and wholesome meet, and that a penny in it shall goe further and give better contentment then some penny worth of Beefe, Bacon, Fish, or any other hard salt meat ; yet I do not wish any man of ship-board to make this a continuall feeding dith, for it is both too pleasant and too strong, and where evacuation of some humors are wanting, may breed inconveniencies in strong bodyes ; but rather to use it once a week as a physical nourisher, or for the comfort of sick and diseased men, whose stomacks are tane away, or else weakened ; there may be made also of this Rice in time of necessity (being ground to a fine meal) an excellent good Bread or Rusk, which is pleasanter, sweeter, and much longer lasting then any made wheat : or any other grain whatsoever, besides many other seeds which would in this place shew but too much curiosity to repeat.

The next Grain unto Rice, which is of estimation & great service at Sea, is wheat, of which although there be divers kinds yet they are all alike for the serving of this purpose ; onely the large and thick hul'd wheat (being well dried) will last the longest, but the small and fine skin'd wheat yields the purer flowre and makes the better meal : now of this wheat is made divers dishes of meat, for some to take it, and bruise or beat it in bagges till the upper skin be beaten off, and then having dreft and winnowed it, boyl it in cleane water till it burst, and grow as thicke as pappe, then take it from the fire, and being hot, put it into severall dishes of wood, or traies, so much in every dish or tray, as may serve four men, and so let it cool, then give it to the sick or sound as you shall be directed, and it is an excellent good meat, either cold or else hot, and a little butter melted with it, or being again boyled in fresh water, and seasoned with salt and a little Sugar, it makes an excellent Grewel, or Loblolly, which is a very sove-
Wheat, and
the use.

raign at Sea. Also your parched Wheat is a very good food at Sea, and of much request and estimation, being sprinkled with a little salt; and of this food a little will serve a man at a time, by reason that the much sweetness thereof soon filleth and cloyeth the stomach, yet it is wondrous light of digestion, and breeds great strength, and much good blood, as we daily find by experience.

Of Oat meale
and the use.

The next Grain unto this which is to be recommended to the Sea (and which is indeed so any thing inferior to either of the other going before, both for strength and lasting) is Oat-meal, which by reason of the great dryness, and drying thereof, feels little or no imperfection at the sea, as being unapt to suck or draw in any of the ill or moyst vapours thereof. Of this Oat-meal is made many good flesh, and comfortable meates at sea, as *Gruell*, or *Loblolly*, by boyling it in fresh water, and seasoning it with Salt, and (if you have it continually) sometimes with Sugar and a few Currants; and a little Mace. which is meat of great strength and goodness, especially for such as are sick and weak; for it is a great restorer of nature, and a purger of the blood; also to steep the whole Groats of Oate meal a night in water, and then drayning them, and putting it into a bagge, boyl it till the Groats break; then putting it out of the bagge, butter it with butter, and it is an excellent food; as also boyling Oate-meale in fresh Water with Barley, or Dreggs, and the hinder end of your Beer-barrels, makes an excellent good portage, and is of great use in all the parts of the West Country, especially, where Mariners or Sea-men live, and are called by the name *Drouffon* portage. Also, of Oate-meal is made that meate which is called in the West, *Washbrew*, and may be made at the Sea at your pleasure, being a meat of that great account amongst *Devonshire* and *Cornish* men, that they will allow it to be a meat of singular great strength and goodness, and withall so light of digestion, that a man can very hardly surfeit upon it at any time; and I am the rather induced to believe the same, because I have observed and seene many of the

the labouring men of that Country to eat such an unmeasurable quantity thereof, that in mine eye one mans supper would have served a whole family.

But you will say, Hunger and labour are such excellent Sauce, that they digest any thing.

To that I answer, that I have seen Gentlemen and Gentlewomen of that Country, of whom as much curiosity hath attended, as is lyable to the City, nay such as have had sickness their best familiar, yet eate of this with great and sharp appetite, and when health was most to be feared, then to boast of most soundnesse. This *Washbrew* is to look upon like Painters Size, or new made Jelly, being nothing but the very heart of the Oat-meal, boyled and drained to that height and thicknesse, having neither Hull nor Bran in it, but the pure Meale and Water, and is to be eaten either with Wine, strong Beere, or Ale, or with clarified Honey, according to mens stomacks and abilities. Now this the eaters thereof affirme, that by no meanes it must be chewed, but rather swallowed by the spoonfull whole, because chawing like a pill makes it taste unpleasant. There is again another meate to be made of Oat-meal, which is called Girt-brew, and is somewhat more coorse, and lesse pleasant than wash brew, having both the bran and hulls in it, yet it is accounted a food of a very good strength, and exceeding wholsome for mans body, and of my knowledge much used and much desired of all labouring persons that are acquainted with it: Many other foods there are to be made of Oat-meal, but these shall be at this time fully sufficient.

The next Grain to this I account Barley, which may be every way used like unto Wheat, either to make Grewel, to be creyed, parcht, or boyled and for Barley for this purpose of food, the best is French Barley, the next is Barley big, or bear-Barley; and the worst are the spice or battledore Barley, and our common English barley.

And as Barley or Wheat, so you may use your bucke, and your *Indian Siligo*, for they are of like nature, onely they aske a longer time in their beating, steeping, and boyling, because they are naturally more hard and more dry, by reason of the
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heat of the Climate in which the best grow ; and it is ever to be observed for a rule, that the dryer you keep your Corn at Sea, the better it is, and sweeter and longer lasting.

Of pulse, and
first of beans
the use.

Now having shewed the use of these lighter grains, I will come to Pulse, and shew their use and benefit at Sea, or in best and towns : and of pulse, I will first speak of Beanes as a principall food, wholesome and strong, and though not so fine and light of digestion as any of the former, yet exceeding hearty and sound, and a great breeder of good blood : They are for the most part to be boyled whole, till such time as they appear soft and tender, or begin to break, and then drained from the water are served in trayes, and well salted, and so eaten ; a pottle whereof is thought a full proportion for four men : and of these beanes there are divers kinds as the common Garden bean, or the French bean, which is great, broad and flat, and these are the best to boyle either with meat or by themselves, and ask the least labour, because their outter skinne is most tender and the inward substance most apt to be molified and softened : they may also be boyled both when they are young and green, and when they are old and dry, and the meat at both times is good and savory.

The French
bean.

The Kidney-
bean.

The next bean to these are the Kidney bean, which is flatter & lesser, and nreer the proportion of a Kidney then the French bean is, and this is also a Garden bean, and whilst it is young and green is to be eaten sallet-wise after they are boyled, both the Cod and Bean together, and it is certain, a better sallet cannot be tasted ; for the Cod or Husk is every way as excellent in taste as the bean is ; but after they grow old and dry, and that the moisture is gone out of the cod, then it is meet to thrash them, and boyl them like the French bean, and they are every way as good meat and as soon boyled and as tender.

Common field
beans, the use.

The next bean to these are your common and ordinary field beanes, which having tough and hard skins aske more boyling then the other beanes, and are somewhat harder in taste, yet a good sound food also ; there be many that parch them in the fire, and think them then the best meat ; because the fire sooner breaks the skin and softneth the kimmel ; because they cannot be done so abundantly, and therefore are not so much in use.

Of pease and
the use.

After this great sort of pulse, I will now speak of the smaller
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fort, as pease and their like, and of pease there be two kinds, the Garden pease, and the field pease, and for this use (albeit both are very good) yet the Garden pease are best, for they are soonest boyld and are most tender, and serve for most use, as for pottage boyling, parching, spelting; and of these Garden pease, there are divers kinds, as white pease, French pease, Hastings, Rounivals and such like, the first being the longest lasters, the second the pleasantest in taste, the third the earliest and tenderest, and the last largest and fullest.

The field pease are only of two kinds, as the white pease and the gray pease; and they seldome make pottage, because they are unapt to break, but are only for boyling and making of leap pease, or for parching, yet a good and a strong food: and as we use pease, so in other Countries they use Lupins, Lentils, Tares, fetches, and such like smaller pulse, but they are neither so good, wholsome, nor savoury in taste, being a kind of grain more rank, füllome, and breeding of ill blood and infection within: these in cases of 'ca-fare and war-fare, ought principally to be eschewed and shunned.

Now it resteth after this long digression of these severall graines, and their uses, with the meates and profits which are made of them, that wee come to the safe manner of keeping and preserving them either by Land or Water, for Victual, or Transportation, so as they may last and indure without ill smell or rottenesse.

And first for transportation of grain by Sea, it is two wayes to be done, as either in great quantities for trade and the victualling of other nations, or in smaller quantity for victualling the men in the Ship, prepared for a long and tedious voyage.

For the transporting of Grain for trade in great quantities, it is to be intended the voyage is seldome long, but from neighbour to neighbour, and therefore commonly they make close decks in the ships to receive the grain, fair and even boarded, yet if such decks be matted and lined, both under, and on each side, it is much the better; and this matting would be strong and thin. There be some which make the decks only of mats, and sure it is sweet, but not so strong as the boards: therefore the best way of transportation, is to have strong boarded decks well
S matted

Several sorts
of Garden-
pease.

Grain for
trade.

To transport
Grain for
trade.

matted; and then spreading the Corn of a reasonable thickness, to cover it with matting again, and then to lay corn on it again, and then mats again, that between every reasonable thickness of Grain a mat may lye; the profit whereof is, that when the Corn with his own heat, and the working of the Sea shall begin to sweat, which sweat, for want of aire to drye it up, would turn to putrefaction.

Then these mats thus lying between, will not onely exhale and suck up the sweat, but also keep the Corn so cool and dry, that no imperfection shall come unto it. And here is to be noted, That these mats should rather be made of dry white bents, then of flags and bulrush; for the bent is a firm, dry, crispe thing, and will not relent or sweat of it self, but the flag or bulrush is a spongy and soft substance, which is never empty of its own and other moistures.

Transporting
of Vittuals.

Now for transporting of Grain, for Vittuals for the Shippe, which is in much smaller quantity, because it is but for the private use of a few within the ship; the onely best and safest way, is, to take Salt-fish barrels or any Caske in which any Salt fish hath been piled, as Cod, Herrings; Salmon, Sprats, or any other powdred Fish; and whilst the vessels are sweet, you shall chalk them both within and without with plaster, daubing them all over; then into them put your Grain of what kind soever it be, and head them up close; and then stow them in such convenient dry place of the ship, as you shall thinke fit, and questionlesse, if belief may be given to the worthiest Authors which have writ in this kind, you may thus keep your Grain sweet, sound, and in full perfection from one year to an hundred and twenty years; but certainly dayly experience shews us, that all kind of Grain thus put up and kept, will remain sound and sweet, three, four, and as some say, seven years, for so far hath lately been try'd: and what here I speak of ship-board, the like may be done in any Town of War or Garrison, whether besieged, or not besieged, or in any other place, where any necessity shall compell; the proof of this manner of piling or putting up of Grain, serveth as well for Land as Sea.

CHAP. XX.

*The Enriching of all manner of barren Grounds, and to
make it fruitfull to bear Hoppes.*

THe Hop of all plants is the most tender, and can endure neither too rich a ground, nor yet too poor: for being planted in the first, it bringeth forth only leaves and no bells, and in the latter yieldeth neither leaves nor bells.

Now in the first sort of Ground, which is fertile and rich, ^{Abating fertility.} I have nothing to do but only to advise how you may allay and lessen that too much fatnesse, by mixing your hills well with Chalk, or small sharp Gravel, if it be a hassel or mix'd mould: and with good store of red sand if it be a stiff clay, for either of these mixtures will in short space abate any fertility.

But if the soyl be contrary to this, that is extreame barren, ^{Increasing of fertility.} then you shall seek by these meanes following to encrease the fertility. First when you have taken a view of that barren earth, with you intend to convert to a Hop-garden; you shall first look to the situation thereof, whether it lye high or low, whether it be subject to inundations or drownings, or that it lye ^{Choice of Earth.} safe and free from any such annoyance: If it be subject to great and deep over-flowes, then it is no ground for this purpose but if it be onely lyable but to some small washings, then you may by a few small draines & sewers cast through your alleyes, convey away the water to some lower grounds, so as it may not continue long in the Gardens to do hurt. Besides, for a further safety to the Hop, you shall make your hills a great deal bigger and higher, that when any over-flow shall happen, the water may not reach above the mid-part of the hill at the most, for the root may endure moystning, but not drowning; and this water thus running through the alleyes, and not drowning the root, will bring to the ground very much fertility. But how soever after you have eat'd your ground of these particular faults, yet the generall fault, which is barrenness, will remain still: therefore, having plotted out your Garden, and fenced it sufficiently about, you shall then cast up your hills about *Michaelmas*, placing ^{Draining water.} them

**Casting of
hills and
allies.**

them in a very orderly manner, and making alleys between them of four or five foot breadth between hill and hill, so as a man may walk at pleasure through and about them: neither shall these hills stand all directly behind another, for so one will overshade another, which is an annoyance, but according to this Figure, where there is a largeness of space, and a by-passage, through which the Sun may come to give comfort to every Plant.

These hills, if the ground be free from water, may be raised about two foot, or a foot and a half high, and of a compass answerable to the height; neither so little, that the hill may be sharp like a Sugar loaf, nor yet so bigge, that the hill may lie flat, and so retain and hold any rain or wet, which shall fall upon it; but you shall keep a due middle proportion, making the hill convenient for your Plants and Poales, and so as it may shoot or put off any wet, or other annoyance, which shall fall upon it.

The composition of the enriching of hills.

Now these hills you shall not make intirely, all of one mould, but you shall take, as it were, a third part or better thereof, then another part of the earth which lyeth under dung-hills, and the last part of Soap-ashes ; and these three bodies you shall mixe equally together, and of them compound your Hop-hills : but if this seem somewhat difficult, and that you cannot find enough for your purpose of either of these manure, then you may take three parts of the naturall earth, and but only a fourth part of the other two, and thereof mixe your Hop-hills, and it will be sufficient to afford you profit enough ; provided you be able once in three or four years to renew it, for so long this will last in full strength and power.

Preparing of the allics.

When you have thus made up your hills, you shall then pare up with a paring shovell all the green swarth quite through all your allyes at least four fingers thick, and with the swarth so pared up, you shall cover all your hills almost to the top, turning the green swarth next unto the earth, so as it may rot, for that is an excellent manure also : then when your allies are all

thus cleansed of their swarth, you shall take good store of braken or ferns, and strow it all over quite thorow all the allies, so, that it may lye in a good thickness, almost to the midst of the hills, which having all the Winter to rot in, will not only be an exceeding comfort to the hills, and preserve both them and their plants from many evils, but also being shovelled up together with the earth in the spring time, will be a marvellous strong manure wherewith to replenish the hills, and to make them to prosper exceedingly, and to save much other cost and charges as well in manure as in carriage.

When your hills are thus enriched, and your allies thus prepared, you shall then open your hills in the top, and set your plants, that is to say, in every hill four plants at the least, being well prepared; and this should be done in the month of *October*, and these plants must be set good and deep in the earth, and covered all over at the least four fingers thick: and if with the earth which covereth these plants you mixe Oxe blood and Lime, it will not only give great comfort and nourishment to the Plants, but also defend and save the roots from wormes and other vermines, which otherwise would seeke to destroy them.

The Planting
of Hopps.

After your Garden is thus planted over, you shall then let it rest till the following Spring, and about April, finding the small Twines of your Hopps issued out of the Hills and running alongst the ground, you shall then set up your Poles, which Poles so they be long and streight, may be of any wood you please, as either Ash, Elme, Withy, Willow, or Sallow, and in the setting up of these poales, you shall have two very carefull respects: First, that in putting in of the poales, and fastening them with the earth, you do not hurt the Hop roots, which a small carelesnesse may do, but be sure to set them cleer at the roots: and that you may do it the better, and make your poles to stand the faster, it is good that you have an iron auger, therewith first to pierce the ground, and then to put the pole in after, and so ram it in hard that it may not stirre. The second care is that you place not one poale to overshaddow another, but that they may stand so cleare one from another, that which way soever the Sun shall cast his beames, yet every plant (as it winds about the

Poling of
Hopps.

the pole) may be an equall partaker of the same.

This, with a small observation in the setting up of the poles may easily be performed : the number of poales that you shall set on every hill, must be answerable to the Syens which shall issue from the rootes, allowing to every poal two Syens at the least, and not above three at the most : these Syens (when your hills are poled) you shall with your hands twine about their severall poales, and those which are but new peeping from the ground, you shall so fold among the other Branches, as they may of themselves run about the poal; and as these, so also all the other twigs, which are any way derived from the main Sien, leaving not any at all to run upon the ground; for that is altogether profittlesse, and to no use.

Of weeding
Hops.

For the weeding of this barren earth thus made it to an Hop-Garden, there is little care to be had: for first the soap ashes wherewith the hills are manured, the Oxe blood and the Lime, are such enemies to all manner of weeds, that they will not suffer any to grow where they abide : Next the Braken and Fern, which covereth the alleyes is such a poysoner and smotherer of any thing that shall grow underneath it, that it will not suffer any weed to peep or spring up through it ; yet if in any especiall place, where neither of these defences come, it happen that any weeds do grow, then you shall with your best care cut them away, or pull them up, and so your Garden shall remain comely, pleasant and fruitfull to every prospect.

CHAP. XII.

*A generall computation of man, and cattels labours :
what each may do without hurt daily.*

Plowing and
Sowing.

TO speak generally of all Husbandly works ; where the Countrey is tolerable, without any extraordinary difficulty, you shall understand, that a man may well in stiff grounds, plow an Acre, or an Acre and an half. and in light sand grounds two or three Acres with one Teame in a day, and he may plough and sow in stiff ground two Acres and an halfe each day, and in light ground four at least with one Team : and alwayes what he soweth, that he may harrow the same day also.

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A man may well mow of good and deep loggy meadow, or of rough, uneven meadow, every day one acre ; mowing clean and making a smooth boord of well standing and good smooth meadow, an acre and a half each day : and of very thin and short grasse, or upland meadow, two acres at the least every day.

Also, he may mow of Corn, as Barley and Oats, if it be thick, Mowing. leggy and beaten down to the earth, making fair work, and not cutting off the heads of the ears, and leaving the straw still growing one acre and a half in a day : but if it be good thick and fair standing corn, then he may mow two acres, or two acres and a half in a day : but if the corn be short and thin, then he may mow three, and sometimes four Acres in a day, and not be overlaboured : Also of beanes he may mow as much, and of pease mixt with beanes, having a hook to follow him, no lesse ; for they are works in this nature most easie, and least troublesome.

One man with a Binder may well reap an Acre of Wheat Reaping. Or Rye in a day, if it be principall good and well standing but if laid or beaten down with weather, then three rood is fully sufficient for a dayes labour. but if it be thin and upright standing, then he may reap and bind five toods in a day : of small pease ; Fetches, and such like, a man may well reape two acres every day.

Now forasmuch as it is a custome in divers Countries (and truly is exceeding profitable and worthy imitation) to sheafe Binding of Barley and Oates. and bind up both Barley and Oats, as well as Wheat or Rye, and that both saveth much Corn, and also makes it take a great deal lesse roome, and that this labour is to be done after the mowers, as the other was after the reapers, by gathering the barley, or Oates up without a sickle or hook, as it lyes in the swath, and so binding it in sheaves, y^eu shall understand that one man in a day shall bind as much as one mower can mow ; and if the man be any thing skilfull in the labour, two binders will bind as much as three mowers can mow.

For the gathering or inning of Grain, no man can proportion the number of loads ; or quantity of ground shall dayly be Gathering in of Grain. brought home, sith the journeyes are uncertain, some going

a mile, some halt a mile, and some two mile: therefore it is the Husbandmans best way, the first day to go with his Teame himself, and both to observe the labour and distance of place, and by that to compute what may be done after, without hurt to his cattle, and where he fails of any hope, there to make a strict account of the error; for it is either ignorance or carelesse-ness which brings forth mischances, speaking of husbandry, as over-throwing the Teame, over-loading the Team, breaking necessary instruments or not respecting the wayes and passages; any of which may in a day hinder more then halfe a dayes labour.

Ditching.

Again, a man may in a day ditch and quickset of a reasonable ditch four foot broad, and three foot deep, a rod or a pole a day; allowing sixteen feet to the rod, & so of large measure less ground, and of lesse ground larger measure according to the sufficiency of the fence which you purpose to make.

Hedging.

A man may hedge also in a day, if the hedge be good and substantial, that is to say five foot high, well bound, thick stackt, and close laid, two rod in a day, and if the worke be lower or thinner, then double so much more according to the former proportion.

Plashing.

For this plashing of hedges, or making a quick fence, if he do it workmanly, and that the growth be high and well grown, and then he lay it thick, close, and strongly bound in the top, turning the quick downward and inward, to plash a rod a day, is as much as any man can well do: but if he plash it after the well-country fashion, that is, onely cutting it down, and laying it along close to the ground, seeking only thicknesse, and not much guard or comlineffe, then he may well plash a rod and a halfe a day without trouble: and sure in this work is great care and art to be used, as well for the preservation of the quick, as the goodnesse of the fence, being a thing of worth and validity to every Husbandman.

Delving.

Again, a man may delve or dig, as for Garden-mould Hemp-yard, Flax-yard, or for the setting of corn, or for levelling of uneven places, one rod in a day and the ground so digg'd and delved, he may rake, dresse, and levell in the same day also: but if he dig it deep, and trench it, and manure it, as is meete: i-
ther

or for Garden, Orchard, or corn setting, then to delve halfe a roūd in a day, is a very great proportion, because ordinarily to delve, as to receive ordinary seeds, requires but one spade graft in depth; but extraordinarily to delve as for enriching and bettering of the ground, and to cleanse it from stones, weeds and other annoyances, will require two spades graft, at the least.

Lastly, a man may thrash if the corn be good and clean, with- Thrashing.
out some extraordinary abuse or poverty in the grain, in one day four bushels of wheat or Rye, six bushels of Barly or Oats, and five bushels of beans or pease: but the pulse must then be imagined to be exceeding good, other wise a man shall thrash lesse of it, than of any other kind of grain; for as when it is well loaden, it yeeldeth plentifully, so when it is poor and lightly loaden, it yeeldeth little or nothing, and yet hath not one stroke lesse of the staile, nor any labour saved, more then belongs to the best pulse whatsoever, being ever at least three times turned, and four times beaten over.

Having thus generally run over (in a short computation) the labours of the Husbandman, I will now briefly as I can, goe over the particular dayes labour of a Farmer or Plow-man shewing the particular expence of every hour in the day, from his first rising, till his going to bed, as thus for example: we will suppose it to be after *Chr. stmas*, and about plow-day (which is the first setting out of the plow) and at what time men either begin to fallow, or to break up Pease-earth, which is to lye to baite, according to the custome of the Country; at this time the Plowman shall rise before four of the clock in the morning, and after thanks given to God for his rest, & prayer for the success of his labours he shall go into his stable, or beast-house, and first he shall fodder his Cattle, then cleanse the house, and make the boorhs clean; rub down the cattle, and cleanse their skins from all filth, then he shall curry his Horses, rub them with cloaths and wisps, and make both them and the stable as clean as may bee, then he shall water both his oxen and Horses, and housing them again, give them more fodder, and to his Horse by all means provender; as chaffe and dry pease or beans or Oat huls, pease or beanes or clean Oats, or clean Garbadge (which is the hinder ends of any Grain but Rye) with the straw chopt small amongst it according

The particu-
lar expence of
a day.

ding as the ability of the Husbandman is.

And whilst they are eating their meat, he shall make ready his Collers, Hames, Treates, Halters, Mullens, and Plow-gear, seeing every thing fit, and in his due place, and to these labours I will also allow full two houres, that is, from foure of the clock till sixe ; then shall he come into breakfast, and to that I allow him half an hour, and then another halfe hour to the gearing and yoking of his Cattle; so that at seaven of the clock he may set forward to his labour, and then he shall plough from seven of the Clock in the morning, till betwixt two and three in the afternoon ; then he shall unyoake and bring home his Cattle, and having rubb'd them, drest them, and cleansed away all dirt and filth, he shall fodder them and give them meat ; then shall the servants go into their dinner, which allowed halfe an hour, it will then be towards foure of the clock, at which time he shall goe to his cattle again, and rubbing them down, and cleansing their stalls, give them more fodder : which done, he shall go into the Barn, and provide and make ready fodder of all kinds for the next day, whether it be hay, straw, or blend-fodder, according to the ability of the Husbandman.

This being done and carried into the stable, oxe-house, or other convenient place, he shall then go water his Cattel, and give them more meat, and to his Horse provender, as before is shewed : and by this time it will draw past six of the clock, at what time he shall come into supper, and after supper, hee shall either by the fire side mend shooes both for himselfe and their Family, or beat and knock Hemp or Flax, or picke and stamp Apples or Crabs, for Cyder or Verdjuyce, or else grind male on the quernes, pick candle rushes, or doe some Husbandly office within doors till it be full eight a clock : Then shal he take his Lanthorn and Candle, and goe see his Cattel, and having cleansed the stall and planks, litter them down, look that they be safely tyed, and then fodder, and give them meat for all night ; then giving God thanks for benefits received that day, let him and the whole household go to their rest till the next morning.

Now it is to be intended, that there may be in the Household

Household more servants then one ; and so you will demand of me what the rest of the servants shall be employed in, before and after the time of plowing. To this I answer, that they may either goe into the barn and thrash, fill or empty the malt fat, load or unload the Kiln, or any other good and necessary worke that is about the yard ; and after they come from plowing, some may go into the Barn and thrash, some hedge, ditch, stop gaps in broken Fences, digge in the Orchard or Garden, or any other Out-work which is needfull to bee done, and which about the Husbandman is never wanting, especially one must have a care every night to look to the mending or sharpening of the Plough-irons, and the repairing of the Plough and Plough-gears, if any be out of order, for to defer them till the morrow, were the losse of a dayes work, and an ill poynt of Husbandry,

Now for the particular labours of Cattel, though it be already inclusively spoken of in that which is gone before, where I shew you how much a man may conveniently plough in a day with one Team or Draught of Cartell, yet for further satisfaction you shall understand that in your Cartell there are many things to be observed, as the kind, the number, and the soyl they labour in. For the kind which are Oxen, Bulls, or Horses, the best for the draught, are Oxen, and the reasons I have shewed in my former Works : The next are Horses ; and the worst, Bulls ; because they are most troublesome : the number fit for the plough, is eight, six, or four ; for the cart, five or four ; and for the Waine, never under six, except in leading home of harvest, where loading easily, four very good Oxen are sufficient ; for the soyl, if it be of the toughest and deepest earth, eight beasts can doe no more but fallow or breake up Pease earth, no, nor fewer sūre, if the season grow hard and dry ; for soyling, winter rigging and seed furrow, sixe beasts may dispatch that labour : if the soyl be mix'd and haffel, then sixe may fallow and sow Pease, and four doe every other ordure : but if it be light and easie sand, then foure is enow in every season. For the quantity of their worke, an Oxe plough may not doe so much as a Horse-plough, because they are not so swift, nor may be driven out of their pace, be-

Particular labours of Cattel.

ing more apt to surfeit than Horses be, so that for an Ox to plough to do an Acre, and a Horse to plough an Acre and a Rood, or an Acre and an half in good ground, is work fully sufficient.

CHAP. XXII.

The applying of Husbandry to the several Countries of this Kingdom, wherein is shewed the office and duty of the Carter or Plow-man.

IT is to be understood, that Husbandry doth vary according to the Nature and Clymates of Countries : not one rule observed in all places, but according as the earth, the aire, the much or little heat, moisture or cold doth increase or diminish, so must the skillfull Husbandman alter his seasons, labours, and instruments ; for in stiff Claves, as are all the fruitful Vales of this Kingdom (of which I have named most part in a Chapter before) as also Huntington-shire, Bedford-shire, Cambridge-shire, and many other of like nature, all manner of arable works must be begun betimes in the year, and the Ploughes and instruments must be of large size and strong timber, and the labour great and painfull : so also in mixt soyls that are good and fruitfull, as Northampton shire, Hartford-shire, most part of Kent, Essex, Bark-shire, and Counties of like nature, all arable toiles would begin at latter seasons, and the Ploughes and Instruments would be of middle size, and indifferent timbers, and the labour somewhat lesse then the other : but the light sandy grounds which have also a certain natural fruitfulness in them : as in Norfolk, Suffolk, most part of Lincoln-shire, Hamp-shire. Surry, and Countries of that nature, all arable toyles would begin at the latest seasons, and the Ploughes and Instruments would be of the smallest and lightest size, and of the least timber, and the labour of all other is easiest.

Lastly, for the barren unfruitfull earth (of which only I have written in this Book (as is Devon-shire, Cornwall, many parts of Wales, Darbishire, Lancashire, Cheshire, Yorkshire, and many other like, or worse than they : the arable toiles would have a fit season of the year, according to the temperatnesse of the year, which if it happen early, then you must begin your labours at latter seasons

and for your Plough and Instruments, they must not keep any certaine proportion, but be framed ever according to the place and the strength and stiffer ground having ever the strong and big. Plough with Instruments of like kind and the lighter earth a Plow with Instruments of more easie substance : as for the labour in the sowing, and no other, then that which hath been already declared in this book.

And hence it comes that the office and duty of every skillfull Plough-man, or Carter is first to look to the nature of the earth, The Carters office. next to the seasons of the year, then to the custmes and fashions of the place wherein he liveth : which custmes although they beeld as second natures amongst us, and that the best reasons of the best work men commonly are, that thus I do, because thus they do ; yet would I wish no man to bind himself more strictly to custmes, then the discourse of reason shall be his warrant, and as I would not have him to prejudicate in his own opinion, so I would not have him too great a slave to other mens traditions but standing upon the ground of reason made good by experience, I would ever have him profit in his own judgement.

Now the fourth office and duty of the Husbandman, is, with great care and diligence, to respect in what sort of fashion to plough his ground ; for although I have in the former Chapter shewed how he should lay his furrows, what depth he shall plow them, and how hee shall bee able to raise and gaine the greatest store of mould, yet is there also another consideration to be had no less profitable to the Husbandman then any of the former ; and that is, how to lay your Land best for your own profit and ease, as also the ease of your Cattel which shall draw with-
in your charge as thus for instance : If your arable Land shall lye against the side of any steep hill (as for the most part all barren earths do) if then you shall plow such Land directly against the hill, beginning below and so ascending straight upright, and so down again and up again, this very labour and toyling against the hill will breed such a bitter wearisomness to the cattel, and such a discouragement, that you shall not be able to compass one halfe part of your labour, besides the danger of overheating and surfeiting of your beasts, whence will spring

many mortal diseases : Therefore when you shall plough any such ground, be sure ever to plough it side-ways over thwart the hill, where your beasts may tread on the level ground and never directly up and down, so shall the compost and manure which you lay upon the ground not be so soon wash'd away from the upper part of the ground, because the furrows not lying straight down in an even descent, but turned crosse-ways upward against the hill, it must necessarily hold the soyl within it, and not let it wash away.

Of Catrell for draught.

Again, it is the office of every good plowman to know what Catrell are meetest for his draught, as whether Oxen or Horse, or both Oxen and Horse : wherein is to be understood, that although of all draughts whatsoever within this Kingdome, there is none so good to plow withall, both in respect of the strength, stability, indurance, and fittest for labour, as the Oxen are ; in whom there is seldom or never any losse : because whensoever his service faileth in the draught, his flesh will be of good price in the shambles ; yet notwithstanding in this case a man must necessarily bind himself much to the custome of the Country, and fashion of his neighbours ; for if you shall live in a place where fuel is scarce & far to be fetch'd, as commonly it is in all barren Countries, which, for the most part are stony Champains, or cold mountains ; and your neighbours as well for the speed of their journies, as for length keep Horse-draughts : in this case also you must do the like, or else you shall want their Company in your journey, which is both discomfort and disprofit, if any mischance or casualty shall happen, or being inforced to drive your Oxen as fast as they do their Horse, you shall not onely over-heat, tire, bruise, and spoyl them ; but also make them utterly unfit either for feeding or labour, and therefore if your Estate be mean, and that you have no more but what necessity requires, then you shall sort your Plow or Teame according to the fashion of your Country, and the use of your neighbours : but if God have blest you with plenty, then it shall not be amisse for you to have ever an Ox draught or two, to till your Land ; and a Horse draught to do all your forraign abroad business : so shall your work at home ever go constantly forward, and your outward necessary Provisions be never wanting. Now

for

for the mixture of Oxen and Horses together, it falleth out oftentimes that the Plowman of force must be provided with Cattle of both kind, as if he happen to live in a rocky Country, where the steepnesse of the hils, and narrownesse of the wayes, wil neither suffer Cart, Wain, nor Tumbrel to pass; in this case you shal keep Oxen for the plow, to till the ground with, and horses to carry pots and hooks: the first to carry forth your manure, and the other to bring home your hay and Corn harvest, your fuel and other provisions, which are needfull for your family, as they do both in Cornwall, and other mountainous Countries, where Carts and Wains, and such like draught, have no possible passage.

Again, it is the office and duty of every good Plow-man to know his severall labours, for every severall month through the whole year, whereby no day nor hour may be mispent, but every time and season employed according at his nature requireth: as thus for example.

In the month of January the painfull Plowman if he live in January. fertile and good soyles, as among rich, simple clayes, he shall first plow up his Pease earth, because it must lye to take bait before it be sown; but if he live in fruitfull well mixt soyles, then in this month he shall begin to fallow the field he will lay to rest the year following: but if he live upon hard barren earths (of which chiefly I write) then in this month he shall water his meadows & pasture grounds, and he shal drain and make dry his arable grounds, especially where he intends to sow Pease, Oates, or Barley the seed time following. Also he shall stub up all such rough grounds as he intends to sow the year following. You shall measure and trim up your Garden moulds, and you shall comfort with manure sand, or lyme, or all three mixt together, the roots of all barren fruit-trees: and also cut down all such timber; only there will be losse in the bark, for the time is somewhat too early for it to rise. Lastly, you may transplant all manner Fruit-trees the weather being open, and the ground easie; you may rear Calves, remove Bees, and for your own health keep your body warme let good dyet and wholesome be your Physician, and rather with exercise then sawce encrease your appetite.

In

February.

In the month of *February*, either set or sow all sorts of Beans, Pease, and other Pulse, and the stiffer your ground is the sooner begin your work; prepare your Garden mould, and make it soft and tender; prune and trim all sorts of Fruit-trees from moss, cankers, and all superfluous branches; plash your bridges, and lay your quick-fets close and intire together; plant Roses, Gooseberries, and any fruit that grows upon little bushes; graft at the latter end of this month upon young and tender stocks, but by all means overlade not the stocks.

Lastly for your health, take heed of cold, for be it meats that are slimy and phlegmarick, and if need require either purge, baths, or bleed as Art shall direct you.

March.

In the month of *March*, make an end of sowing of all sorts of small Pulse and begin to sow Oats, Barley, and Rye, which is called March-rye; graft all sorts of Fruit-trees, and with young Plants and Syens replenish your Nursery, cover the roots of all trees that are bared, and with fat earth lay them close and warm: if any Tree do grow barren, bore holes in the root, and drive hard wedges or pins of Oak-wood therein, and that will bring fruitfulness: transplant all sorts of summer flowres, and give new comfort of manure and earth to all early out-landish flowres, especially to the *Grown Emperiall Tulips*, *Hyacinth*, and *Narcissus* of all shipes and colours, cut down under wood, for fuel and fencing, and look well to your Ewes, for then is the principall time of yeaning.

And lastly, bathe often, and bleed but upon extremity, purge not without good counsel, and let your dyet be cool and temperate.

April.

In the month of *April*, finish up all your Barley seed, and begin to sow your Hemp and Flax: sow your Garden seeds, and plant all sorts of hearbs; finish grafting in the stock; but begin your principal inoculation for then the Rind is most plyant and gentle: open your Hives and give bees free liberty, and leave to succour them with food, and let them labour for their living.

Now cut down all great Oak-timber, for now the bark will rise, and be in season for the Tanners; now scour your ditches, and gather such manure as you make in the streets and high wayes, into great heaps together; lay your meadows, sleight your

com-

corn-ground, gather away stones; repair your high wayes. Set Oziers and Willows, and cast up the banks and mines of all decayed fences.

Lastly, for your health, either purge bathe or bleed, as you shall have occasion, and use all wholesome recreation: for than moderate exercise in this month, there is no better Physicke.

In the month of *May*, sow Barley upon all light sands and burning grounds, so likewise doe your Hemp or Flax and all sorts of tender garden seeds, as are Cucumbers and Melons, and all kind of sweet smelling herbs and flowers. Fallow your stiffe clayes; summer sowe your mixt earth, and sowe all light and loose hot sands: prepare all barren earth for Wheat and Rye, burn bait, stub ground, or Fens, and root out Broom and Fern; begin to fold your sheep, lead forth manure, and bring home fuel and fencing, seed your winter corn, follow your common works and put all sorts of grass either in pasture or teather: put your Mares to the horse, let nothing be wanting to furnish the Dairy: and now put off all your Winter fed Cattel, for now they are scarce fed and dearer, put young steares and dry kine now to feed at full grass, and away with all peafed sheep; for the sweetness of grass mutton will pull down their prices.

Lastly, for your health, use drinke that will coole and purge the blood, and all other such physical precepts, as true Art shall prescribe you: but beware of Mountebanks and old wivs tales, the latter hath no ground, and the other no truth, but apparent cosenage.

In the month of *June*, carry sand, marle, lime; and manure of June what kind soever to your land; bring home your coales and other necessary fuel fetcht far off; shear early fat sheep; sow all sorts of tender herbs, cut rank low meadows; make the first return of your fat cattle, gather early summer fruits, distill all sorts of plants and herbs whatsoever.

And lastly, for your health; use much exercise, thin dyet, and chaste thoughts.

In the month of *July*, apply your hay harvest; for a day's stock is many pounds lost; chiefly when the weather is unconstant

stant, shear all manner of field sheep, Summer-stirre rich stiff grouds, soyl all mixt earths, and latter soyl all loose hot sands. Let hearbs you would preserve, now run to seed; cut off the stalks and out landish flowres, and cover the rootes with new earth so well mixt with manure as may be; sell all such Lambs as you feed for the butcher, and still lead forth sand, marl, lime, and other manure; fence up your copses, graze your elder under-woods and bring home all your field timber.

And lastly for your health, abstain from all physick, bleed not but upon violent occasion, and neither meddle with Wine, Women, nor other wantonness.

Augst.

In the month of *August*, apply your Corn Harvest, sheare down your Wheat and Rye, mow your Barley and Oates, and make the second return of your fat sheep and cattle; gather all your Summer greater fruit, Plumbs, Apples, and Peares; in Summer make your sweet-perry, and Cydar; Set slips, and syens of all sorts of Gilly-flowres, and other flowers, and transplant them that were set the spring before, and at the end of this month begin to winter-rig all fruitfull soyles whatsoever. Geld your lambs, carry manure from your dove-coates, and put your swine to the early or first mast. And lastly for your health, shun feasts and banquets. Let physick alone, hate wine, and onely take delight in drinks that are coole and temperate.

September.

In the month of *September*, reap your pease, beanes, and all other pulse, making a final end of your harvest; now bestow upon your wheat Land your principal manure, and now sow your Wheat and Rye, both in rich and in barren climates; now put your swine to mast, of all hands, gather your winter fruit, and make file of your woole, and other summer commodities; now put off those stocks or bees, you mean to sell, or take for your own use, close thatch and daube warm all the surviving hives, and look that no Drone, Mice, or other Vermine be in or about them; now thatch your stacks and reeks, thrash your seed Rye and Wheat, and make an end with your cart of all forraign journeyes.

Lastly for your health, in this month, use physick, but moderately; forbear fruits that are too pleasant or rotten, and as death shun ryot and surfeit.

In

In the month of October : finish your wheat seed, and scour October.
 ditches and ponds, plash and lay hedges and quickset, transplant
 remove or Set all manner of fruit-trees, of what nature or quali-
 ty soever ; make your Winter Cider and Perry, spare your private
 pastures, and eat up your corn fields and commons, and now
 make an end of winter ridging, draw furrows to drain, and keep
 dry your new sown corn, follow hard the making of your malt
 rear all such calves as shal fall, and wean those foales from your
 draught mares, which the spring before were foaled : now sell all
 such sheep as you will not winter give over folding, and sepearate
 Lambs from the Ewes, which you purpose to keep for your own
 stock.

Lastly, for your health, refuse not any needfull physick at the
 hands of the learned phylitian, use all moderate sports, for any thing
 now is good, which reviveth the spirits.

In the month of November, you may sow either Wheat or Rye November.
 in exceeding hot soyls, you may then remove all sorts of fruit
 trees, and plant great trees either for shelter or shadow : now cut
 down all sorts of Timber, for plows, carts, axeltrees, naves, har-
 rows, and other husbandly offices ; make now the last returne of
 your grasse fed cattle, bring your swine from the mast, and feed
 them for slaughter, rear what calves so ever fall, and break up all
 such Hemp and Flax, as you intend to spin in the winter sea-
 son.

Lastly, for your health, eat good wholesome and strong meats
 very well spiced and drest, free from rawnesse ; drink sweet wines
 and for digestion ever before cheese prefer good and moderate
 exercise.

In the month of December, put your sheep and swine to the December.
 paste Reeks, and fat them for the slaughter and market ; now
 kill your small porks, and large bacons, lop hedges and trees.
 saw out your timber for building, and lay it to season ; and if
 your land be exceeding stiff, and rise up in an extraordinary fur-
 row, then in this month begin to plow up that ground whereon
 you mean to sow clean beans only ; now cover your dainty fruit
 trees over with canvase, and hide all your best flowres from frost
 and stormes, with rotten old horse litter ; now drain all your
 corn fields, and as occasion shal serve, so water and keep moyst

your meadows: now become the fowler, with Piece, Nets, and all manner of Engines for: in this month no fowl is out of season, now fish for the Carp, the Bream, Pike, Tench, Barbel, Peal and Salmon.

And lastly, for your health, eat meats that are hot and nourishing, drink good wine that is neat, sp'ightlv and lusty, keep thy body well clad and thy house warm, forsake whatsoever is flegmatick, and banish all care from thy heart, for nothing is more unwholsom then a troubled spirit.

Many other observations belong unto the office of our skillfull Plow-man or Farmer, but since they may be imagined too curious, too needlesse, or too tedious I will stay my pen with these already rehearsed, and think to have written sufficiently, touching the application of grounds, and office of the Plow-man.

The end of Markham's farewell to Husbandry.

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Casting the hills	p. 110	The Carters office	p. 119
Preparing the Allies, and Planting		Of Cartel for the Draught	121
the Hopps.	ibid	The several labours of the several	
		Months.	p. 121, 10 126.

ADDITION.

*An excellent way to take Moats, and to preserve good
Ground from such annoyance.*

PUt Garlick, Onions, or Leeks, into the mouths of the holes, and they will come out quickly amazed.

FINIS.

A NEW ORCHARD AND GARDEN: OR,

The best way for Planting, Grafting, and to make any
Ground good, for a rich Orchard: Particularly in the North,
and Generally for the whole Common-Wealth, as in Nature, Reason,
Situation, and all Probability, may and doth appear.

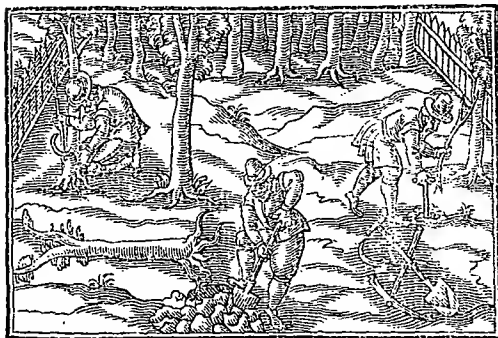
With the Country Houſ-wifes Garden for Herbs of Common uſe :
Their Virtues. Seasons, Proſſits, Ornaments, variety of Knots. Models for
Trees, and Plots, for the beſt ordering of Grounds, and Walks.

AS ALSO

The Huſbandry of Bees, with their ſeveral Uſes and Annoyances :
*All being the experience of Forty and eight yeeres labour, and now the third
time corrected and much enlarged, by William Lawſon.*

Whereunto is newly added the Art of Propagating Plants; with the true
Ordering of all manner of Fruits, in their gathering : Carrying
home, and Prefervation.

Skill and paines, bring fruitfull gaines.



Nemo sibi natuſ.

London, Printed by William Wilson, for George Sawbridge, at the Bible
on Ludgate-Hill, neere Fleet-Bridge. 1660.



To the Right Worshipfull
Sir HENRY BELLOSES,
Knight and Baronet

Worthy Sir,

When in many years by long experience
I had furnished this my Northerne
Orchard and Country Garden with
needfull Plants and usefull hearbs,
I did impart the view thereof to my Friends,
who resorted to me to confer in matters of
that nature; they did see it, and seeing it, de-
sired it; and I must not deny now the publi-
shing of it, (which then I allotted to my pri-
vate delight) for the publick profit of others.
Wherefore though I could plead Custome, the
ordinary excuse of all writers, to chuse a Pa-
tron and Protector of their works, and so
shroud my self from scandall under your ho-
noura-

The Epistle Dedicatory.

nourable favour ; yet have I certain reasons to excuse this my presumption : First, the many courtesies you have vouchsafed me. Secondly, your delightfull skill in matters of this nature. Thirdly, the profit which I received from your learned discourse of Fruit-trees. Fourthly, your animating and assisting of others to such inducements. Last of all, the rare work of your own in this kind: All which to publish under your protection, I have adventured (as you see). Vouchsafe it therefore entertainment, I pray you, and I hope you shall find it not the unprofitablest servant of your retinue. For when your serious employments are over-passed, it may interpose some commodity, and raise you contentment out of variety.

Your Worships

most bounden

WILLIAM LAWSON.



THE PREFACE,

To all well minded.

ARt hath her first original out of Experience, which therefore is called The School Mistress of schools, because she teacheth infallibly, and plainly, as drawing her knowledge out of the course of Nature, (which never fails in the general) by the senses, feelingly apprehending, and comparing, (with the help of the Mind) the works of Nature; and as in all other things naturall, so especially in Trees. For what is Art more than a provident and skillfull Correctrix of the faults of Nature in particular works, approved by the Senses? As when good ground naturally brings forth Trifles, trees stand too thick, or too thin, or disorderly, or (without dressing) put forth unprofitable Suckers, and such like; all which and a thousand more, art reformeth, being taught by Experience; and therefore must we count that art the surest, that stands upon Experimentall Rules, created by the Rule of Reason (not conceit) of all other Rules the surliest.

Whereupon have I got my meere and sole Experience, with our assistance to my former written Treatise, gathered these Rules, and set them down in writing, not during the while the I last laboured in of my Lord and Master in Heaven. Neither is his opinions so any thing that differ from the Common opinion in our points, to make it knowne ever, what good I have found out, that is faculty, by long tryall and experience. I confesse freely my want of curious skill in the art of planting: and I admire and praise Plinie, Aristotle, Virgil, Cicero, and

The Preface.

many others, for wit and judgment in this kind, and leave them to their times, manner, and several Countries.

I am not determin'd (neither can I worthily) to set forth the praises of this art; how some, and not a few, even of the best, have accounted it a chiefe part of earthly happines, to have fair and pleasant Orchards, as in Hesperia and Thessaly; how all with one consent agree, that it is a chief part of Husbandry, (as Tully de Senectute) and Husbandry maintains the world: how antient, how profitable, how pleasant it is; how many secrets of nature it doth contain, how loved, how much practised in the best places, and of the best. This hath bene done by many: I only aime at the common good. I delight not in curious conceits, as planting and grassing with the Roots upwards, inoculating Roses on Thorns, and such like; although I have heard of divers, proved some, and read of more.

The Stationer hath (as being most desirous, with me, to further the common good) bestowed much cost and care in having the Knots and Models by the best Artizan cut in great variety, that nothing might be any way wanting to satisfy the curious desire of those that would make use of this Book.

And I shew a plain and sure way of planting, which I have found good by 48 yeeres (and more) experience in the North part of England. I prejudicate and envie none; wishing yet all to abstain from maligning that good (to them unknown) which is well intended. Farewell.

Thine for thy good,

W. L.



THE BEST, SVRE AND READIEST WAY TO MAKE A *Good Orchard and Garden.*

C H A P. I.

Of the Gardener and his Wages.



Whoever desireth and indevoureth to have a pleasant and profitable Orchard, must (if he be able) provide himself of a fruiterer, Religious, Honest, Skillfull in that faculty, and therewithall painfull. By Religious I meane (because many think Religion but a Fashion or Custom to goe to Church) maintaining, and cherishing things religious: as Schools of Learning, Churches, Tythes, Church goods and righte, and above all things, Gods word, and the Preachers thereof, so much as he is able, practising prayers, comfortable conferences, mutual instruction to edifie, almes, and other works of charity, and all out of a good conscience.

Honesty in a Gardener, will grace your Garden, and all your house, and help to stay unbridled Serving men, giving offence to none, nor calling your Name into Question by dishonest acts, nor infecting your family by evill counsel or example. For there is no plague so infectious as popery and knavery, he will not purloin your profit, nor hinder your pleasures.

Concerning his skill, he must not be a Sciolist, to make a shew or take in hand that which he cannot perform, especially in so weighty a thing as an Orchard: than the which there can be no human thing more excellent, either for pleasure or profit, as shall (God willing) be proved in the treatise following. And what an hindrance shall it be, not onely to the owner, but to the common

mon good, that the unspeakable benefit of many hundred years shall be lost, by the audacious attempt of an unskillfull Arborist?

Painfull.

The Gardner had not need to be an idle or lazie Lubber, for so your Orchard, being a matter of such moment, will not prosper, there will ever be something to do. Weeds are alwayes growing, the great mother of all living Creatures, the Earth, is full of seeds, in her bowels, and any stirring gives them heat of Sunne, and being laid neer day, they grow: Moles work daily, though not alwaies alike: Winter heats at all times will grow (except in extreme frost). In winter your trees and hearbs would be lightened of Snow, and your allies cleansed: drifts of Snow will set Deer, Hares, and Conies, and other noysome beasts over your walls and hedges into your Orchard. When Summer cloaths your borders with green and peckled colours, your Gardner must dress his hedges, and antick works: watch his Bees, and hive them: Distil his Roses and other Hearbs. Now begin Summer fruits to ripe, and crave your hand to pull them. If he have a Garden (as he must needs) to keep, you must needs allow him good helpe, to end his labours which are endless: for no one man is sufficient for these things.

Wages.

Such a Gardner as will conscionably, quietly and patiently, travel in your Orchard, God shall Crown the labours of his hands with joyfulness, and make the clouds drop fatnesse upon your trees; he will provoke your love, and earn his wages, and fees belonging to his place. The house being served with fallen fruit, superfluity of hearbs, and flowers, seeds, greasse, Sers, and besides all other of that fruit which your bountifull hand shall reward him withall, will much augment his wages, and the profit of your Bees will pay you back again.

If you be not able, nor willing to hire a Gardner, keep your profits to your self, but then you must take all the pains: and for that purpose (if you want this faculty) to instruct you, have I undertaken these labours, and gathered these Rules, but chiefly respecting my Countreys good.

C H A P. II.

Of the Soyl.

FRUIT-trees most common, and meetest for our Northern Countries : (as Apples, Pears, Cherries, Filbirds, Red and White, Piummes, Damsons, Bullis,) for we meddle not with Apricocks Kinds of trees nor Peaches, nor scarcely with Quinces, which will not like in our cold parts, unless they be helped with some reflect of the Sun or other like means, nor with bushes bearing berries, as Barberriers, Goose-berries or Grosers, Raspe-berries, and such like, though the Barbery be wholesome, and the Tree may be made great ; do require (as all other Trees do) a black, fat, mellow, clean and well tempered soyl, wherein they may gather plenty Soyl. of good sap. Some think the Hasel would have a chanily rock, and the fallow, and elder, a waterish marish. The soyl is made better by delving and other meanes, being well melted, and the wildness of the earth and weeds (for every thing subject to man and serving his use (not well ordered) is by nature subject to the curse,) is killed by frost and drought, by fallowing and laying on heaps, and if it be wild earth, with burning.

If your ground be barren (for some are forced to make an Or- Barren earth. chard of barren ground) make a pit three quarters deep, and two yards wide, and round in such places where you would set your trees, and fill the same with fat, pure, and mellow earth, one whole foot higher than your soyl, and therein set your plant. For who is able to manure a whole Orchard plot, if it be barren? But if you determine to manure the whole site, this is your way ; dig a trench half a yard deep, all along the lower (if there be a lower side of your Orchard plot,) casting up all the earth on the inner side and fill the same with good, short, hot, and tender muck; and make such another trench, and fill the same as the first, and so the third, and so throughout your ground ; and by this meanes your plot shall be fertile for your life. But be sure you set your Trees neither in dung, nor barren earth.

Your ground must be plain, that it may receive, and keep Plain. moisture, not onely the rain falling thereon, but also water cast upon it, or descending from higher ground by sluices, Conduits,

Moist. &c. For I account moysture in summer very needfull in the soyle of trees, and drought in winter, provided that the ground be neither boggy, nor the inundation be past 24 hours at any time, and but twice in the whole Summer and so oft in the Winter. Therefore if your plot be in a bank, or have a descent, make trenches by degrees, allies, walks, and such like, so as the water may be stayd from passage; and if too much water be any hindrance to your walks (for dry walkes do well become an Orchard, and an Orchard them) raise your walks with earth first, and then with stones as big as wall-nuts, and lastly, with gravel. In Summer you need not doubt too much water from heaven, either to hurt the health of your body, or your trees. And if over-flowing moist you, after one day, avoid it then by deep trenching.

Some for this purpose dig the soyl of their Orchards, to receive moisture, which I cannot approve: for the roots with digging are often times hurt, and especially being digged by some unskillfull servant; for the Gardner cannot do all himself: and moreover, the Roots of Apples and Pears being laid neer day with the heat of the Sun, will put forth suckers, which are a great hinderance, and sometimes with evill guiding, the destruction of trees, unlesse the delving be very shallow, and the ground laid very level again. Cherries and Plums, without delving, will hardly or never (after twenty years) be kept from such suckers, nor Asps.

Grass.

Grass also is thought needfull for moisture, so you let it not touch the Roots of your trees: for it will breed mosse; and the boal of your tree neer the earth, would have the comfort of the Sun and air.

Some take their ground to be too moist when it is not so, by reason of water standing thereon; for except in sower marshes; springs, and continuall over-flowings, no earth can be too moist. Sandy and fat earth will avoid all water falling, by receipt: indeed a stiff clay will not receive the water, and therefore if it be grassie or plain, especially hollow, the water will abide, and it will seem waterish, when the fault is in the want of manuring, and other good dressing.

This plainness which we require had need be naturall, because to force any uneven ground, will destroy the fatnesse: for every soyl

soyl hath his crust next day ; wherein trees and hearbs put their roots, and whence they draw their sap, which is the best of the soyl, and made fertil with heat and cold, moisture and drough, and under which, by reason of the want of the said temperature by the said four qualities, no tree nor hearb (in a manner) will or can put root ; as may be seen, if in digging your ground, you take the weeds of most growth, as grass or docks (which will grow, though they lye upon the earth bare,) yet bury them under the crust, and they will sooner dye and perish, and become manure to your ground. This crust is not past 15 or 18 inches deep in good ground, or other grounds lesse. Hereby appears the fault of forced plaines, *viz.* your crust in the lower parts is covered with the crust of the higher parts, and both with worse earth : your hights having the crust taken away, are become meerly barren : so that either you must force a new crust, or have an evill soyl. And be sure you levell before you plant, lest you bee forced to remove, or hurt your plants by digging, and casting among their roots. Your ground must be cleared, as much as you may, of stones and gravel, walls, hedges, bushes, and other weeds.

Naturally plain.

Crust of the earth.

CHAP. III.

Of the Site.

There is no difference, that I find, betwixt the necessity of a good soyl, and a good Site of an Orchard: For a good soyl (as is before described) cannot want a good Site; and if it doe, the fruit cannot be good ; and a good site will much amend an evill soyl. The best site is in low grounds, and (if you can) neer unto a River. High grounds are not naturally fat.

Low and neer a River.

And if they have any fatnesse by mans hand, the very descent in time doth wash it away. 'Tis with grounds in this case, as it is with men in a common wealth: Much will have more ; and, Once Poor, seldom or never Rich. The Rain will scind and wash, and the wind will blow fatnesse from the hights to the hollows, where it will abide, and fatten the earth, though it were barren before.

Hence it is, that wee have seldom any plaine grounds and low, a barren, and as seldom any hights naturally fertile. It is

unspeakable, what fatnesse is hrought to low grounds by inundations of waters; neither did I never know any barren ground in a low plain by a River side. The goodnesse of the soyl in *Howle* or *Hollowdernesse* in *York-shire*, is well known to all that know the River *Humbe*, & the huge bulke of their Cattel there. By estimation of those that have seen the low grounds in *Holland* and *Zealand*, they far surpass all most Countries in *Europe* for fruitfulness, and only because they lye so low. The world cannot compare with *Egypt* for fertility, so far as *Nilus* doth overflow his banks. So that a fitter place cannot be chosen for an Orchard, then a low plain by a River side. For besides the fatnesse which the water brings, if any cloudy mist or rain be stirring, it commonly falls down to, and follows the course of the River. And where see we greater Trees of bulk and bough, then standing on, or neer the water side? If you ask why the plains in *Hollendernesse* and such Countries, are destitute of wood? I answer, that men and cattel (that have put trees thence, from out of plains to void corners) are better than trees. Neither are those places with out trees. Our old Fathers can tell us how woods are decayed, & people in the room of trees multiplied. I have stood somewhat long in this poynt, because some do condemn a moist soyl for fruit Trees.

Psal. 1. 3.
Ezek. 17. 8.
Ecclus. 39. 17.

Mr. Markham.

Winds.
Chap. 13.

A low ground is good to avoid the danger of winds, both for shaking down your unripe fruit. Trees (the most that I know being laden with wood for want of proyning, and growing high by the unskilfulness of the Arborist, must needs be in continuall danger of the South West, West and North-west winds, especially in *September* and *March*, when the ayr is most temperate from extream heat and cold, which are deadly enemies to great winds. Wherefore chuse your ground low: Or if you be forced to plant in a higher ground, let high and strong walls, houses and trees, as Wall nuts, Plane-trees, Oaks and Ashes, placed in good order, be your fence for winds,

The sucken of your dwelling house, descending into your Orchard, if it be cleanly conveyed is good.

Sun.

The Sun, in some sort, is the life of the world: it maketh proud growth, and ripens kindly and speedily, according to the golden Tearm, *Annus fructificat, non tellus*. Therefore in the

Countries.

Countries neerer approaching the Zodiack the Suns habitation, they have better, and sooner ripe fruit, then we that dwell in these frozen parts.

This provoketh most of our great Arborists to plant Apricocks, Cherries, and Peaches, by a wall, and with tacks, and other means to spread them upon, and fasten them to a wall, to have the benefit of the immoderate reflex of the Sun, which is commendable, for the having of fair, good, and soon ripe fruit. But let them know, it is more hurtfull to the trees than the benefit they reap thereby, as not suffering a tree to live the tenth part of his age; it helps Gardeners to work. For first, the wall hinders the roots; because into a dry and hard wall of earth or stone, a tree will not, nor cannot put any root to profit, but especially it stops the passage of the sap, whereby the bark is wounded, and the wood and diseases grow, so that the tree becomes short of life. For as in the body of man, the leaning or lying on some member, whereby the course of blood is stopt, makes that member as it were dead for the time, till the blood return to his course, and I think, if that stopping should continue any time the member will perish for want of blood, (for the life is in the blood) and so indanger the body; so the sap is the life of the tree, as the blood is to mans body: neither doth the tree in winter (as is supposed) want his sap, no more than mans body his blood, which in winter, and time of sleep, draws inward: so that the dead time of winter, to a tree, is but a night of rest: for the tree at all times, even in winter, is nourish'd with sap and growth as well as mans body. The chilling cold may well some little time stay or hinder the proud course of the sap, but so little and so short a time, that in calm and mild seasons, even in the depth of winter, if you mark it, you may easily perceive the sap to put out, and your trees to increase their buds which were formed in the Summer before, and may easily be discerned; for leaves fall not off, till they be thrust off with the knots or buds, whereupon it comes to passe, that trees cannot bear fruit plentifully two years together, and make themselves ready to blossom against the seasonableness of the next spring.

And if any frost be so extream, that it stay the sap too much, or too long, then it kills the forward fruit in the bud, and some-

times the tender leaves and twigs, but not the tree : Wherefore to return, it is perilous to stop the sap. And where, or when did you ever see a great tree pickt on a wall ? Nay, who did ever know a tree so unkindly split, come to age ? I have heard of some that out of their imaginary cunning, have planted such trees, on the North side of the wall, to avoid drought : but the heat of the Sun is as comfortable (which they should have regarded) as the drought is hurtfull. And although water is a soveraign remedy against draught, yet want of Sun is no way to be helped. Wherefore, to conclude this Chapter, let your ground lye so, that it may have the benefit of the South and west Sun, and so low and close, that it may have moisture, and increase his fatness, (for trees are the greatest suckers and pillars of the earth) and (as much as may be) free from great winds.

CHAP. IV.

Of the Quantity.

Orchard as
good as a
Corn field.

Compared
with a Vine-
yard,

IT would be remembred what a benefit riseth, not onely to every particular owner of an Orchard, but also to the common wealth by fruit as shall be shewed in the sixteenth Chapter (God willing) ; whereupon must needs follow, the greater the Orchard is (being good, and well kept) the better it is : for of good things, being equally good, the bigger is the best. And if it shall appear, that no ground a man occupieth, (no, not the Cornfield) yeeldeth more gain to the purse, and house keeping (not to speak of the unspeakable pleasure) quantity for quantity, than a good Orchard, (besides, the cost in planting and dressing an Orchard is not so much by far, as the labour and Seeding of your Corn fields nor for durance of time comparable, besides the certainty of the one before the other) I see not how any labour or cost in this kind, can be idely or wastfully bestowed. or thought too much. And what other thing is a Vineyard, in those Countries where Vines doe thrive, then a large Orchard of trees bearing fruit ; or what difference is there in the juyce of the Grape, and our Syder and Perry, but the goodnesse of the soyle, and clime where they grow ? which maketh the one more ripe, and so more pleasant than the other. Whatsoever can be said for
the

the benefit rising from an Orchard, that makes for the largeness of the Orchard bounds. And me thinks they do preposterously, Compared with a Garden that bestow most cost and labour, and more ground in and upon a Garden, then upon an Orchard, whence they reap and may reap both more pleasure and more profit, by infinite degrees. And further, that a Garden never so fresh, and fair, and well kept, cannot continue without both renewing of the earth and the herbs often, in the short and ordinary age of a man: whereas your Orchard well kept, shall dure divers hundred yeeres, as shall be shewed Chap 14. In a large Orchard there is much labour saved, in fencing and otherwise: for three little Orchards or a few trees, being in a manner all out-sides, are so blasted and endangered, and commonly in keeping neglected, and require a great fence; whereas in a great Orchard, trees are a mutuall fence one to another, and the keeping is regarded; and less fencing serves six acres together, then three in severall inclosures.

Now what quantity of ground is meetest for an Orchard, can no man prescribe, but that must be left to every mans severall judgment, to be measured according to his ability and will, for other necessities besides fruit must be had, and some are more delighted with Orchards than others. What quantity of ground.

Let no man, having a fit plot, plead poverty in this case; for an Orchard once planted, will maintain it self, and yeeld infinite profit beside. And I am perswaded, that if men did know the right and best way of planting, dressing, and keeping trees, and felt the profit and pleasure thereof, both they that have no Orchards, would have them, and they that have Orchards would have them larger, yea fruit trees in their hedges, as in *Worcester-hire*, &c. And I think, the want of planting is a great losse to our Common wealth, and in particular, to the owners of Lordships, which Lordships themselves might easily amend, by granting longer time and better assurance to their Tenants, who have taken up this Proverb, *Boach and sit, Build and sit*: for who will build or plant for another mans profit? Or the Parliament might injoyne every occupier of grounds to plant and maintain: for so many acres of fruitfull ground, so many several trees, or kinds of trees for fruit. Thus much for quantity.

CHAP.

How Land-
Lords by their
Tenants may
make flourish-
ing Orchards
in England.

A. All these Squares must be set with Trees, the Gardens and other Ornaments must stand in spaces betwixt the trees, and in the borders and fences

B. Trees twenty yards asunder.

C. Garden Knots

D. Kitchen Garden

E. Bridge.

F. Conduir.

G. Stairs.

H. Walks set with great wood thick

I. Walks set with great wood round about your Orchard

K. The Out fence

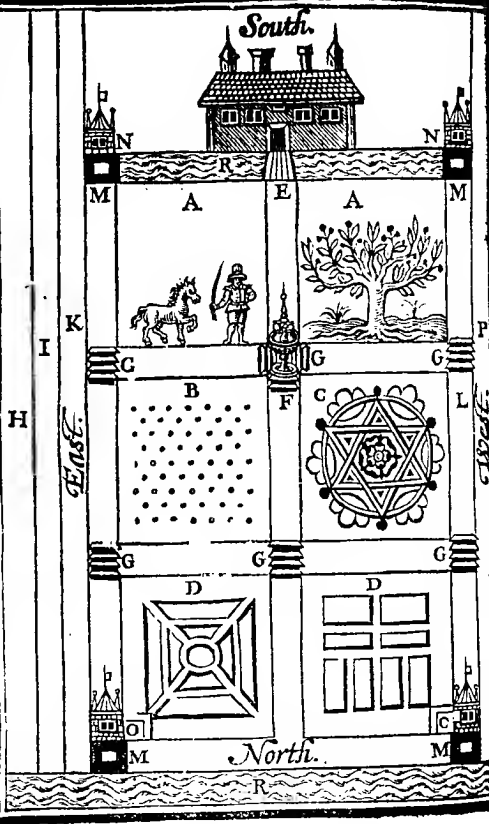
L. The Out fence set with stone-fruit.

M. Mount. To force earth for a Mount or such like, set it round with quick and lay boughs of trees strangely intermingl'd, the tops inward, with the earth in the middle

N. Still-house.

O. Good standing for Bees, if you have an house.

P. If the River run by your door, and under your Mount it will be pleasant.



CHAP. V.
Of the Form.

THE goodnesse of the soil and site, are necessary to the well-being of an Orchard simply; but the form is so far necessary, as the owner shall think meet. For that kind of form where-with every particular man is delighted, we leave it to himselfe, *Suum cuique pulchrum*. The forme that men like in generall, is a square: for although roundnesse be *forma perfectissima*, yet that principle is good, where necessity by art doth not force some other form. If within one large square, the Gardiner shall make one round Labyrinth or Maze, with some kind of Berries, it will grace you form, so there be sufficient room left for walkes, so will four or more round knots do, for it is to be noted, that the eye must be pleased with the form. I have seen squares rising by degrees, with steyrs from your house-ward, according to this form which I have, *Craffa quod a'nu: Minerva*, with an unsteady hand, rough hewen: for in forming Country gardens. the better sort may use better forms, and more costly work. What is needfull more to be said, I referre all that (concerning the form) to the Chapter 17. of the Ornaments of an Orchard.

The usuall
form is a
square.

CHAP. VI.
Of fences.

ALL your labour past and to come about an Orchard is lost, unless you fence well: It shall grieve you much to see your young setts rubd loose at the Roots, the bark pild, the boughs and twigs crott, your fruit stolne, your Trees broken, and your many years labours and hopes destroyed, for want of fences. A chief care must be had in this point: you must therefore plant in such a soile, where you may Provide a convenient, strong, and seemly fence. For you can possesse no goods, that have so many enemies as an Orchard, look Chapter 13. Fruits are so delightful, and desired of so many. (nay in a manner of all) and yet few will be at cost, and take pains to provide them. Fence well therefore, let your plot be wholly in your owne power, that you

Effects of evil
fencing.

C

make

—

Let the fence make all your fence your self : for neighbours fence is none at all, be your own. or very carelesse. Take heed of a door or window , (yea of a wall) of any other mans into your Orchard, yea, though it be nailed up, or the wall be high, for perhaps they will prove theeves.

Kinds of Fences, All fences commonly are made of Earth, Stone, Brick, Wood, earthen or both earth and wood : Dry wall of earth, and dry ditches are the worst fences save pales or railes, and do waste the soonest, unlesse they be well copt with Glooe and mortar , whereon at Michael tide it will be good to sow Wall-flowers . commonly called Bee-flowers, or winter Gilly-flowers, because they will grow (though among stones) and abide the strongest frost and drought, continually green and flowering even in winter, and have a pleasant smell, and are timely , (that is, they will flower the first and the last of flowers) and are good for Bees. And your earthen wall is good for bees, dry and warm, but these fences are both unseemly, evill to repair, and onely for need , where stone or wood cannot be had. Whosoever makes such walls, must not pill the ground in the Orchard, for getting earth, nor make any pits or hollowes , which are both unseemly and unprofitable : old dry earth mixt with sand is best for these. This kind of wall will soon decay by reason of the Trees which grow neer it, for the roots and boais of great Trees, will increase, undermine, and over-turn such walls, though they were of stone , as is apparent by Ashes, Round-trees, Burt-trees, and such like, carried in the char, or berry, by birds into stone walls.

Pale & Raile. Fences of dead wood, as pales, will not last, neither will railes either last or make good fence.

Stone walls. Stone walls, (where stone may be had) are the best of this sort, both for fencing lasting, and shrouding of your young trees. but about this you must bestow much Paines and more cost , to have them handsome, high and durable.

Quick wood and Moats. But of all other (in mine opinion) Quickwood and moates or ditches of water, where the ground is Levell, is the best fence : In unequal grounds, which will not keep water , there a double ditch may be cast, made streight and Levell on the top two yards broad for a fair walk, five or six foot higher than the soile, with a gutter on either side, two yards wide, and four foot deep, set without with three or four chesse of thorns, and within with Cherries, Plummes,

Plummes, Damsons, Bullis, Filberds, (for I love those trees better for their fruit, and as well for their form, as Privit,) for you may make them take any form. And in every corner, (and middle if you will) a mount would be Raised, whereabout the wood may claſſe, powdered with wood-binde, which will make with dressing a faire, pleasant, profitable, and sure fence. But you must be sure that your quick thorns either grow wholly, or that there be a supply betimes, either planting new, or plashing the old where need is. And assure your self, that neither wood, stone, earth, nor water, can make so strong a fence, as this at seven years growth.

Moates, Fish-ponds, and (especially at one side a River) with Moates, in and without your fence, will afford you fish. fence, and moysture to your Trees; an i pleasure also, if they be so great and deep that you may have Swans, and other water Birds, good for devouring of vermine, and boat for many good uses.

It shall hardly avails you to make any fence for your Orchard, if you be a niggard of your fruit. For as Liberality will save it best from noisome neighbours, (Liberality I say is the best fence) so justice must restrain Rioters. Thus when your ground is tempered, squared, and fenced, it is time to provide for planting.

CHAP. VII.

Of Sets.

THere is not one point (in my Opinion) about an Orchard more to be regarded, than the choise getting and setting of good plants, either for readinesse of having good fruit, or for continuall lasting, for whosoever shall fail in the choice of good sets, or in getting, or gathering, or setting his plants, shall never have a good or lasting Orchard. And I take want of skill in this faculty, to be a chief hinderance to the most Orchards, and to many for having Orchards at all.

Some for Readinesse use slips, which seldome take Root, and slips, if they do take, they cannot last, both because their Root having a maine wound will in short time decay the body of the Tree: and besides, that Roots being so weakly put, are soon nipt with drought or frost, I could never see (lightly) any slip, but of apples onely, set for Trees.

Bur-knot.

A Bur-knot kindly taken from an Apple-tree, is much better and surer. You must cut him close at the Root end, an handfull under the knot, (some use in Summer about Laminas to circumscribe him and put earth to the knots with hay-Ropes, and in winter cut him off and set him, but this is curiosity need'less, and danger with removing and drought) and cut away all his twigs save one, the most principall, which in setting you must leave above the earth, burying his trunk in the crust of the earth for his Root. It matters not much what part of the bough the twigs grow out of. If it grow out of, or neer the Root end, some say such an apple will have no core nor kernel. Or if it please the planter he may let his bough be crooked, and leave out his top end one foot, or somewhat more, wherein will be good grafting; if either you like not, or doubt the fruit of the bough, (for commonly your bur-knots are Summer fruit) or if you think he will not Recover his wound safely.

Usuall sets.

Maine Roots cut.

Srow sets removen.

The most usuall kind of Sets. are plants with Roots growing, of kernels of Apples, Pears, and Crabbs, or stones of Cherries, Plums, &c. removed out of a nursery, wood, or other Orchard, into, and set, in your Orchard in due places; I grant this kind to be better than either of the other by much, as more sure and more durable. Herein you must note, that in Sets so removed, you get all the Roots you can, and without bruising of any. I utterly dislike the opinion of those great Gardeners, that following their books, would have the maine Roots cut away: for tops cannot grow without Roots. And because none can get all the Roots, and removal is an hinderance, you may not leave on all tops, when you set them: For there is a proportion betwixt the Top and Root of a Tree, even in the number, (at least in the growth) If the Roots be many, they will bring you many Tops, if they be not hindered. And if you use to stow or top your tree too much or too low, and leave no issue, or little for sap, (as is to be seen in your hedges) it will hinder the growth of Roots and boal, because such a kind of stowing is a kind of smothering or choaking the sap. Great Wood, as Oak, Elm, Ash, &c. being continually kept down with sheer knife, ax- &c. neither boal nor Root will thrive, but as an hedge or bush. If you intend to graff in your sets, you may cut him closer with a greater wound, and neerer the earth with-

within a foot or two, because the graft or grafts will cover his wound. If you like his fruit, and would have him to be a Tree of himselfe, be not so bold. This I can tell you, that though you do cut his top close, and leave nothing but his bulke, because his roots are few, if he be (but little) bigger than your thumb, (as I wish all plants removed to be) he will safely recover his wound within seven years, by good guidance, that is, if the next time of dressing, immediately above his uppermost sprig, you cut him off aslope cleanly, so that the sprig stand on the back side. (and if you can Northward, that the wound may have the benefit of the Sun) at the upper end of the wound. and let that sprig onely be the boal. And take this for a generall rule; Every young plant, if he thrive, will recover any wound above the earth, by good dressing, although it be to the one halfe, and to his very heart. This short cutting at the remove, saves your plants from wind. and needs the lesse or no staking: I commend not lying or Tying of trees, leaning of Trees against holds or stays; for it breeds obstruction of sap. and wounds incurable. All removing of Trees as great as your arm, or above, is dangerous; though some time such will grow. but not continue long, because they be tainted with deadly wounds, either in the Root or top, (and a Tree once thorowly tainted, is never good.) And though they get some hold in the earth with some lesser taw or taws, which give some nourishment to the body of the Tree; yet the heart being tainted, he will hardly ever thrive: which you may easily discern by the blacknesse of the boughs at the heart, when you dresse your trees. Also, when he is set with more tops than the Roots can nourish; the tops decayings, blacken the boughs, and the boughs the arms, and so they boil at the very heart. Or this taint in the removall, if it kill not presently, but after some short time, it may be discerned, black or yellownesse in the bark, and a small hungred leaf. Or if your removed plant put forth leaves the next and second Summer, and little or few spraves, is a great sign of a taint, and next years death. I have known a Tree tainted in setting, yet grow, and bear blossoms for divers years; and yet for want of strength could never shape his fruit.

Next unto this, or rather equall with these plants, are suck- Suckets good as growing out of the Roots of great Trees, which Cherries and

Plums

Plums do seldome or never want, and being taken kindly with their Roots, will make very good sets. And you may help them much by enlarging their Roots with the taws of the tree, whence you take them. They are of two sorts: Either growing from the very Root of the Tree: and here you must be carefull, not to hurt your Tree when you gather them, by Ripping amongst the Roots, and that you take them clean away; for these are a great and continual annoyance to the growth of your Tree, and they will hardly be cleansed. Secondly, or they do arise from some taw: and these may be taken without danger, with long and good Roots, and will soon become Trees of strength.

A Running
plant.

There is another way, which I have not thorowly proved, to get not onely plants for grafting, but Sets to remain for Trees, which I call a *Running plant*, the manner of it is this: Take a Root or kirkel, and put into the middle of your plot; and the second year in the spring, geld his top, if he have one principal, (as commonly by nature they have) and let him put forth only four Syons toward the four corners of the Orchard, as neer the earth as you can. If he put not four (which is rare) stay his top till he have put so many. When you have four such, cut the stock aslope, as is aforesaid in this Chapter, hard above the uppermost sprig, and keep those four without Syons clean and streight till you have them a yard and a half, at least, or two yards long. Then the next spring, in grafting time, lay down those four sprays, towards the four corners of your Orchard, with their tops in a heap of pure and good earth, and raised as high as the Root of your Syon, (for sap will not descend) and a sod to keep them down, leaving nine or twelve inches of the top to look upward. In that hill he will put Roots, and his top new Gyons, which you must spread as before, and so from hill to hill, till he spread the compasse of your ground, or as far as you List. If in bending the Syons crack, the matter is small; cleanse the ground, and he will recover. Every bended bough will put forth branches, and become Trees. If this plant be of a bur knot, there is no doubt: I have proved it in one branch my selfe, and I know at *Wilton in Cleveland*, a Pear-Tree of a great bulk and age, blown close to the earth, hath put at every knot Roots into the earth, and from Root to top, a great number of mighty arms or Trees, filling a great Room, like many Trees, or

a little Orchard ; much better may it be done by Art, in a lesse Tree. And I could not mislike this kind , save that time will be long before it come to perfection.

Many use to buy sets already grafted, which is not the best way: Sets bought. for first, all removes are dangerous : Again, there is danger in the carriage : Thirdly, it is a costly course of planting : Fourthly, every Gardner is not trusty to sell you good fruit : Fifthly, you know not which is best, which is worst , and so may take most care about your worst Trees. Lastly , this way keeps you from practise , and so from experience, in so Good, Gentlemanly, Scholar-like, and profitable a faculty.

The only best way (in my opinion) to have sure and lasting The best sets. sets, is never to remove : for every remove is a hinderance, if not Unremoved a dangerous hurt, or deadly taint. This is the way : The plat- how. form being laid , and the plot appointed where you will plant every set in your Orchard , dig the room where your set shall stand, a yard compasse, and make the earth mellow and clean, and mingle it with a few cole-ashes, to avoid worms, and immediately after the first change of the Moon, in the latter end of *February*, the earth being afresh turned over , put in every such room three or four kirnels of Apples or Pears of the best ; every kirnel in an hole made with your finger, finger-deep , a foot distant one from another, and that day month following, as many more, (least some of the former mist:) in the same compass, but not in the same holes. Hence (God willing) shall you have roots enough: If they all or divers of them come up, you may draw, (but not dig up (nor put down) at your pleasure, the next *November*. How many soever you take away, to give or bestow elsewhere, be sure to leave two of the proudest. And when in your second or third year you graff, if you graff then at all, leave the one of those two ungrafted, lest in graffing the other, you fail. For I find by tryall, that after the first or second graffing in the same stock, being mist (for who hits all) the third messe puts your stock in deadly danger, for want of issue of sap. Yea, though you hit in graffing, yet may your graffs with wind or otherwise be broken down. If your graff: or graff prosper, you have your desire , in a plant unremoved, without taint, and the fruit at your owne choice : and so you may, (some little earth being removed) pull but not dig up

up the other plant or plants in that room. If your graff or stock, or both perish, you have another in the same place, of better strength to work upon; for thriving without snub, he will overlay your grafted stock much. And it is hardly possible to misse in grafting so often, if your Gardiner be worth his name.

Sets ungrafted
best of all.

It shall not be amisse, (as I judge it) if your kernels be of choice fruit, and that you see them come forward proudly in their body, and beare a fair and broad leaf in colour, tending to a greenish yellow. (which argues pleasant and great fruit) to try some of them ungrafted: for although it be a long time ere this come to bear fruit, ten or twelve years, or more; and at their first bearing, the fruit will not seem to be like his owne kind, yet am I assured, upon Tryall, before twenty years growth, such Trees will increase the bignesse and goodnesse of their fruit, and come perfectly to their owne kind. Trees (like other breeding creatures) as they grow in years, bignesse, and strength, so they mend their fruit. Husbands and Housewives find this true by experience, in the Rearing of their young store. More than this, there is no Tree like this for soundnesse, and durable last, if his keeping and dressing be answerable. I grant, the readiest way to come soon to fruit, is grafting; because, in a manner, all your graffs are taken off fruit-bearing Trees.

Time of removing.

Now when you have made choise of your sets to remove, the ground being ready, the best time is, immediatly after the fall of the Leaf, in or about the change of the Moon, when the sap is most quiet, for then the sap is turning: for it makes no stay, but in the extremity of drought or cold: At any time in winter, may

Generall rule,

you transplant Trees, so you put no ice nor snow to the Root of your plant in the setting: and therefore open, calm, and moist weather is best. To remove, the Leaf being ready to fall, and not fallen, or buds apparently put forth in a moist warm season, for need, sometime may do well; but the safest is to walk in the plain trodden path.

Some hold Opinion, that it is best removing before the fall of the Leaf, and I hear it is commonly practised in the South by our best Arborists, the leaf not fallen, & they give the reason to be, that the descending of the sap will make speedy Roots. But mark the Reasons following, and I think you shall find no soundnesse either

in

in that position or practice, at least in the reason.

1. I say, it is dangerous to remove when the sap is not quiet ; for every remove gives a main check to the stirring sap, by staying the course thereof in the body of your plant, as may appear by trees removed any time in Summer, they commonly dye; nay hardly shall you save the life of the most young and tender plant of any kind of wood (scarcely hearbs) if you remove them in the pride of sap : for proud sap universally stayed by removall, ever hinders, often taints, and so presently, or in very short time, kills. Sap is like blood in mans body, in which is the life, Chap. 3. page 9. If the blood universally be cold, life is excluded : so is sap tainted by untimely removall. A stay by drought, or cold, is not so dangerous (though dangerous, if it be extream) because more natural.

2. The sap never descends, as men suppose; but is consolidated and transubstantiated into the substance of the tree, and passeth (alwaies above the earth) upward, not only betwixt the bark and the wood, but also into and in both body and bark, though not plentifully, as may appear by a tree budding, nay fructifying two or three yeers, after he be circumcised, at the very root, like a River that enlargeth his channel by a continual descent.

3. I cannot perceive what time they would have the sap to descend. At *Midsummer* in a biting drought it stays, but descends not ; for immediately upon moisture, it makes second shoots, as (or before rather) *Michaelis*, when it shapens his buds for next yeers fruit. If at the fall of the leaf, I grant, about that time is the greatest stund, but no descent of sap, which begins somewhat before the leaf fall, but not long ; therefore at that time must be the best removing, not by reason of descent, but stay of sap.

4. The sap in this course hath its profitable and apparent effects : as the growth of the tree, covering of wounds, putting of buds &c. Whereupon it followes, if the sap descend, it must needs have some effect to shew it.

5. Lastly, boughs plaine and laid lower than the root, dye for want of sap descending, except where it is forced by the maine stream of the sap, as in top boughs hanging like water in pipes, or except the plaine boughs lying on the ground put roots of his own ; yea under boughs, which we commonly call water-boughs

can scarcely get sap to live, yea in time dye, because the sap doth presse so violently upward, and therefore the fairest shoots and fruits are alwaies in the top.

Remove soon. *Ob. 11.* If you say that many so removed thrive; I say, that somewhat before the fall of the leaf (but not much) is the stand; for the fall and the stand are not at one instant; before the stand, is dangerous. But to return.

The sooner in Winter you remove your sets the better; the latter the worse; for it is very perillous if a strong draught take your sets before they have made good their Rooting. A plant set at the fall, shall gain (in a manner) a whole years growth of that which is set in the spring after.

**The manner
of setting.**

I use in the setting to be sure that the earth be mouldy, (and somewhat moist) that it may run among the small tangles without straining or bruising; and as I fill in earth to his Root, I shake the Set easily too and fro, to make the earth settle the better to his Roots; and with all easily with my foot I put in the earth close; for Aire is noysome, and concavities will follow. Some prescribe Oates to be put in with the earth: I could like it, if I could know any Reason thereof. And they use to set their plants with the same side towards the Sun; but this conceit is like the other. For first, I would have every tree to stand so free from shade, that not onely the Root (which therefore you must keep bare from grasse) but body, boughs, and branches, and every spray, may have the benefit of the Sun. And what hurt, if that part of the tree which before was shadowed, be now made partakers of the heat of the Sun? In turning of Bees, I know it is hurtfull, because it changeth their entrance, passage, and whole work, but not so in trees.

**Set in the
crafft.**

Set as deep as you can, so that in any wise you go not beneath the crafft. Look Chap 2.

Moisture good

We spake in the second Chapter of moisture in generall; but now especially having put your removed plant into the earth, powr on water (of a puddle were good) by distilling presently, and so every week twice, in strong drought, so long as the earth will drink, and refuse by over flowing. For moisture mollifies, and both gives leave to the Roots to spread, and makes the earth yeeld sap and nourishment with plenty and facility. Nurses,
they

(they say) give best and most milk after warm drinks.

If your ground be such, that it will keep no moysture at the Root of your plant, such plants shall never like, or but for a time. There is nothing more hurtfull for young trees, then peircing drought. I have known trees of good stature, after they have been of divers years growth, and thrive well for a good time, perih for want of water, and very many by reason of caints in setting.

It is meete your sets and grafts be fenced, till they be as big as your arm, for fear of annoyances. Many wayes may Sets receive Grafts must be fenced. damages, after they be set, whether grafted or ungrafted. For although we suppose, that no noysome beast or other thing must have accessse among your trees; yet by casualty, a Dog, Cat, or such like, or your self, or negligent Friend bearing you Company, or a shrewd boy, may tread or fall upon a young and tender plant or graft. To avoid these and many such chances, you must stake them round a pretty distance from the Set, neither so neer nor so thick, but that it may have the benefit of the Sun, Raine, and Air. Your stakes (small or great) would be so surely put, or driven into the earth, that they break not, if any thing happen to lean upon them, else may the fall be more hurtfull then the want of the fence. Let not your stakes shelter any weeds about your Sets; for want of Sun is a great hinderance. Let them stand so far off, that your grafts spreading receive no hurt, either by rubbing on them, or of any other thing passing by. If your stock belong, and high grafted, (which I must discommend, except in need) because there the sap is weak, and they are subject to strong winds, and the lightings of birds,) tie easily with a soft lilt three or foure pricks, under the clay, and let their tops stand above the grafts to avoid the lighting of Crows, Pies, &c. upon your grafts. If you stick some sharp thorns at the Roots of your stalks, they will make hurtfull things keep off the better. Other better fences for your grafts I know none. And thus much for sets and setting.

CHAP. VIII.

Of the distance of Trees.

I know not to what end you should provide good ground, well fenced, and plant good sets, and when your trees should come

Hurts of too
neer planting

to profit, have all your labours lost, for want of due regard to the distance of placing your trees. I have seen many trees stand so thick, that one could not thrive for the throng of his neighbours. If you do mark it, you shall see the tops of trees rubbed off, their side galled like a gall'd horse back ; and many trees have more stumps than boughs, and most trees not well thriving, but short stumpish, and evill thriving boughs ; like a Corn-field over-seeded, or a Town over peopled, or a pasture over laid ; which the Gardener must either let grow, or leave the tree very few boughs to bear fruit. Hence small thrife, galls, wounds, diseases, and short life to the trees : and while they live, green, little, hard, worm-eaten, and evill thriving fruit arise, to the discomfort of the owners.

General rule,
All touches
hurtfull.

To prevent which discommodity, one of the best remedies is, the sufficient and fit distance of trees. Therefore at the setting of your plants, you must have such respect, that the distance of them be such, that every tree be not annoyance, but an help to his fellows ; for trees (as all other things of the same kind) should shroud, and not hurt one another. And assure your self that every touch of trees (as well under as above) is hurtfull : Therefore this must be a general use rule in this Art, that no tree in an Orchard well ordered, or no bough, nor eyon, drop upon or touch his fellows. Let no man think this impossible, but looke in the eleventh Chapter of dressing of trees. If they touch, the wind will cause a forcible rub. Young twigs are tender, if boughs or armes touch or rub, if they are strong, they make great galls. No kind of touch therefore in trees can be good.

The best di-
stance of trees,

Now it is to be considered what distance among Sets is requisite, and that must be gathered from the compasse and room that each tree by probability will take and fill. And herein I am of a contrary opinion to all them which practise or teach the planting of trees, that ever yet I knew, read or heard of : for the common space between tree and tree, is ten foot ; if twenty foot, it is thought very much. But I suppose twenty yards distance is small enough betwixt tree and tree, or rather too too little. For the distance must needs be as far as two trees are well able to overspread and fill, so they touch not by one yard at the least. Now I am assured, and I know one Apple tree, set of a slip *singer great*,
in

in the space of twenty yeares (which I account a very small part of a trees age, as is shewed Chap. fourteen) hath spread his boughs eleven or twelve yards compasse ; that is, five or sixe yards on every side. Hence I gather, that in forty or fifty yeares, (which yet is but a small time of his age) a tree in good soyle, well liking, by good dressing (for that is much available to this purpose) will spread double at the least, viz. twelve yards on a side ; which being added to twelve allotted to his fellow make twenty and foure yards, and so far distant must every tree stand from another. And look how far a tree spreads at his boughs above, so far doth he put his roots under the earth, or rather further, if the earth be not stop nor let by walls, trees, rocks, barren earth, and such like : for an huge bulk, and strong armes, massie boughs, many branches, and infinite twigs, require wide spreading Roots. The top hath the vast aire to spread his boughs in, high and low, this way and that way ; but the Roots are kept in the cust of the earth, they may not goe downward, nor upward out of the earth, which is their Element, no more than the Fish out of the water, Camelion out of the aire, nor Salamander out of the fire. Therefore they must needs spread far under the earth. And I dare well say, If nature would give leave to man, by Art to dresse the Roots of Trees to take away the caws, and tangles that lap and fret, and grow superfluously and disorderly, (for every thing *sublunary* is cursed for mans sake) the tops above being answerably dressed, we should have trees of wonderfull greatnesse, and infinite durance. And I perswade my self that this might be done sometimes in Winter, to trees standing in fair plaines and kindly earth, with small or no danger at all. So that I conclude, that twenty four yards is the least space that Art can allow for trees to stand distant one from another.

The parts of a Tree.

If you aske me what use shall be made of that waste ground betwixt tree and tree : I answer, if you please to plant some tree or trees in that middle space, you may ; and as your trees grow contiguous, great and thick, you may at your pleasure take up those last trees. And this I take to be the chief cause why the most trees stand so thick ; for men not knowing (or not regarding) this secret of needfull distance, and loving

Waste grounds
in an Orchard

fruit of trees planted to their hands, think much to pull up any, though they pine one another. If you or your heirs or successors would take up some great trees (past setting) where they stand too thick, be sure to do it about *Midsummer*, and leave no main Roots. I destinate the space of four and twenty yards, for trees of age and stature. More then this, you have borders to be made for walks, with *Roses*, *Berries*, &c.

And chiefly consider, that your Orchard, for the first twenty or thirty years, will serve you for many Gardens; for *Saffron* *Licorice*, *Roots*, and other herbs for profit, and flowers for pleasure: so that no ground need be wasted if the Gardiner be skillfull and diligent. But be sure you come not neere with such deep delving the Roots of your Trees, whose compasse you may partly discern, by the compass of the tops, if your top be well spread. And under the droppings and shadow of your Trees, be sure no herbs will like. Let this be said for the distance of Trees.

CHAP. IX.

Of the placing of Trees.

THe placing of Trees in an Orchard, is well worth the regard: For although it must be granted, that any of our foresaid Trees (Chap. 2.) will like well in any part of your Orchard, being good and well drest earth; yet are not all Trees alike worthy of a good place. And therefore I wish that your *Filbert*, *Plums*, *Damsons*, *Bullefs*, and such like, be utterly removed from the plain soyl of your Orchard into your fence: for there is not such fertility and easfull growth, as within: and there also they are more subject to, & can abide the blasts of *Aolus*. The *Cherries* and *Plums* being ripe in the hot time of Summer, and the rest standing longer, are not so soon shaken as your better fruit, neither, if they suffer losse, is your losse so great. Besides that, your fences and ditches will devour some of your fruit growing in, or neere your hedges. And seeing the continuance all of these (except *Nuts*) is small, the care of them ought to be the lesse. And make no doubt, but the fences of a large Orchard will contain a sufficient number of such kind of Fruit Trees in the whole compass. It is not materiall, but at your pleasure, in the said fences, you may either intermingle your

your severall kinds of fruit trees ; or see every kind by it selfe, order doth very well become your better and greater fruit. Let therefore your Apples, Pears, and Quinces, possesse the toyl of your Orchard, unlesse you be especially affected to some of your other kinds ; and of them, let your greatest trees of growth stand farther from Sun, and your Quinces at the South side or end, and your Apples in the middle : so shall none be any hindrance to his fellows. The warden tree, and Winter pear, will challenge the preeminence for stature. Of your Apple-trees, you shall find a difference in growth. A good Pippin will grow large, and a Costard tree : stead them on the North side of your other Apples ; thus being placed, the least will give Sun to the rest, and the greatest will shroud their fellows. The Fences and out trees will guard all.

CHAP. X.

Of Graving.

NOW are we come to the most curious point of our faculty, curious in conceit, but indeed as plain and easie as the rest, when it is plainly shewn, which we commonly call Graving. Of Graving
or Carving
Gratting what.



Grafting what sing or (after some) Grating, I cannot Etymologize or shew the original of the Word, except it come of Graving or Carving

A Graft. But the thing or matter is : The reforming of the fruit of one tree with the fruit of another, by an artificial transplanting or transposing of a twigge, bud or leaf, (commonly called a Graft) taken from one tree of the same, or some other kind, and placed or put to, or into another tree in one time and manner.

Kinds of grafting. Of this there be divers kinds, but three or four now especially in use : to wit, Grafting, incising, pocking on, grafting in the scutchion, or inoculating ; whereof the chief and most usuall, is called Grafting by the generall name, *Carex chena* : for it is the most known, surest, readiest, and plainest way to have store of good fruit,

Graft how. It is thus wrought : You must with a fine, thin, strong and sharp Saw, made and armed for that purpose, cut off a stick above the ground, or thereabouts, in a plain without a knot, or as near as you can without a knot (for some stocks will be knotty) your Stock, set or plant being surely stayed with your foot and legg : or otherwise straight overthwart (for the Stock may be crooked) and then plain his wound smoothly with a sharp knife : that done, cleave him cleanly in the middle with a cleaver, and a knock or mallet, and with a wedge of Wood, Iron, or Bone, two handfull long at least, put in the middle of that cleft, with the same knock, make the wound gape a straw breadth wide into which you must put your Grafts.

A graft what. The graft is a top twig taken from some other tree (for it is a folly to put a graft into his own stock) beneath the uppermost (and sometimes in need, the second) knot, and with a sharp knife fitted in the knot (and sometimes out of the knot when need is) with shoulders an inch downward, and so put into the stock with some thrusting (but not straining) bark to bark inward.

Eyes. Let your graft have three or four eyes for readinesse to put forth, and give issue to the sap. It is not amisse to cut off the top of your graft, and leave it but five or six inches long, because commonly you shall see the tops of long grafts dye. The reason is this. The sap in grafting receives a rebuke, and cannot work so strongly presently,

Gently and your graffes receive not sap so readily, as the naturall branches. When your graffs are cleanly and closely put in, & your wedge pulld out nimble, for fear of putting your graffs out of frame, take well tempered mortar, soundly wrought with chaffe or horse dung, (for the dung of Cattel will grow hard, and fraime your graffs) the quantity of a Goose egge, and divide it just, and therewith all cover your stock, laying the one halfe on the one side, and the other halfe on the other side of your graffes, (lest thrusting again your graffes you move them) and let both your hands thrust at once, and alike, and let your clay be tender, to yield easily: and all, lest you move your graffes. Some use to cover the cleft of the stock, under the clay, with a Piece of barke or leafe, some with a scar-cloth of waxe and butter, which as they be not much needfull, so they hurt not, unlesse that by being boue about them, you move your graffs from their places. They use also mosse, tyed on above the clay with some bayar-wicker, or other bands. These profit nothing. They all put the graffes in danger, with pulling and thrusting: for I hold this generall Rule in grafting and planting; if your stock and gr ff.s take and thrive, (for some will take and not thrive, being tainted by some meanes in the planting or grafting) they will without doubt recover their wounds safely and shortly.

General rule.

The best time of grafting, from the time of removing your stock is the next Spring, for that saves a second wound, and a second repulse of sap, if your stock be of sufficient bignesse to take a graff: from as big as your thumbe, to as big as an arme of a man. You may graffe lesse, (which I like) and bigger, which I like not so well. The best time of the year is in the last part of February, or the 1st of March, or beginning of April, when the Sun with his heat begins to make the sap stirre more Rankly about the change of the Moon, before you see any great apparency of leafe or flowers, but onely knots and buds, and before they be proud, though it be sooner: Cherries, Peares, Apricocks, Quinces, and Plummes would be gathered and grafted sooner.

The gr ffes may be gathered sooner in February, or any time within a month, or two before you graffe, or upon the same graffes, (by which I commend) if you get them any time before: for I

Graffes of old
trees.

have known graffes gathered in *December* and do well, take heed of drought, I have my self taken a burke not of a Tree, and the same day when he was laid in the earth about mid *February* gathered grafts and put in him, and one of those graffes bore the third year after, and the fourth plentifully: Graffes of old Trees would be gathered sooner then of young Trees, for they sooner break and bud. If you keep graffes in the earth, moisture with the heat of the Sun will make them sprout as fast, as if they were growing on the Tree. And therefore seeing, keeping is dangerous, the surest way (as I judge) is to take them within a week of the time of your grafting.

Where taken.

The grafts would be taken not of the proudest twigs, for it may be your stock is not answerable in strength. And therefore (say I) the grafts brought from South to us in the North, although they take and thrive, which is somewhat doubtfull, by reason of the difference of the climate and carriage yet shall they in time fashion themselves to our cold Northern soile, in growth, taste, &c.

Eminies,

Nor of the poorest; for want of strength may make them unready to receive sap, (and who can tell but a poor graft is tainted) nor on the outside of your Tree. for there should your Tree spread, but in the midst: for there you may be sure your Tree is no whit hindered in his growth or form. He will still recover inward, more than you would wish. If your clay chift in Summer with drought, look well in the Chinkes for Ermines and Earwigs, for they are cunning and close theeves, about grafts; you shall find them stirring in the morning and evening, and the rather in the moist weather: I have had many young buds of Grafts, even in the flourishing, eaten with Ants. Let this suffice for grafting, which is in the faculty counted the chiefe secret, and because it is most usually, it is best known.

Grafts are not to be dislik'd for growth, till they wither, pine, and die. Usually before *Autumne* they break, if they live. Some (but few) keeping proud and green, will not put till the second year, so is it to be thought of Sets.

The first shew of putting is no sure signe of growth, it is but the sap the graffe brought with him from his Tree.

So soon as you see the graft put forth growth, take away the clay, for then doth neither the stock nor the graft need it, (put a little

little fresh well tempered clay in the hole of the stock) for the clay is now tender, and rather keeps moisture then drought.

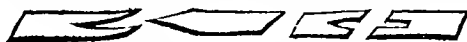
The other waies of changing the naturall fruit of Trees, are more curious then profitable, and therefore I mind not to bestow much labour or time about them, only I shall make known what I have proved, and what I do think.

And first of incising, which is the cutting of the back of the boole, a Rine or branch of a Tree at some bending or knee shoul- Incising.
derwise with two gashes, onely with a sharp knife to the wood: then take a wedge, the bignesse of your graft, sharp ended flat on the one side, agreeing with the Tree, and round on the other side, and with that being thrust in, raise your bark, then put in your graft, fashioned like your wedge just: and lastly, cover your wound, and fast it up, and take heed of straining. This will grow but to small purpose, for it is weak hold, and lightly it will be under growth. Thus may you graft betwixt the bark and the Tree of a great stock that will not easily be clifted. But I have tryed a better way for great trees, *viz.* First cut him off straight, and cleave him with your knife, then cleave him into four quarters equally with a strong cleaver: then take for every clift two or three small, (but hard) wedges, just of the bignesse of your grafts, and with those wedges driven in with a hammer, open the four clifts so wide, (but no wider) that they may take your four grafts with thrusting, not with straining: and lastly, cover and clay it closely, and this is a sure and good way of grafting: or thus, clife your stock by his edges twice or thrice with your cleaver, and open him with your wedge in every clift one by one, and put in your grafts and then cover them. This may do well.

Packing on, is when you cut aslope a twig of the same bignesse with your graft, either in or beside the knot, two inches long, Packing thus.
and make your graft agree jump with the cyon, and gath your graft and your cyon in the middlest of the wound, length-way, a draw breadth deep, and thrust the one into the other, wound to wound, sap to sap, bark to bark, then tye them close and clay them. This may do well. The fairest graft I have in my little Orchard, which I have planted, is thus packt on, and the branch whereon I put him, is in his plentifull Root.

To be short in this point, cary your graft in any sort or fashion

two inches long and joyne him cleanly, and close to any other sprig of any Tree in the latter end of the time of grafting, when sap is somewhat rise, and in all probability, they will close and thrive: thus.



The sprig.

The graft.

The twig.

The graft.

Or any other fashion you think good.

Innoculating.

Innoculating is an eye or bud, taken bark and all from one Tree, and placed in the room of another eye or bud of another, cut both of one compass, and their bound. This must be done in Summer, when the sap is proud.

Grafting in
Scutchion.

Much like unto this, is that they call grafting in the scutchion, they differ thus: That here you must take an eye with his leaf, or (in mine opinion) a bud with his leaves. (Note that an eye is for a scion, a bud is for flowers and fruit) and place them on an other Tree, in a plain (for they so teach;) the place or bark where you must set it, must be thus cut with a sharp knife, and the bark raised with a wedge, and then the eye or bud put in and so bound up, I cannot deny but such may grow. And your bud if he take will flower, and bear fruit in that year: as some grafts and sets also, being set for blossoms. If these two kinds thrive, they reform but a spray, and an undergrowth. Thus you may place Roses or Thorns, and Cherries or Apples, and such like. Many write much more of grafting but to small purpose. Whom we leave to themselves, and their followers, and ending this secret, we come in the next Chapter to a point of knowledge, most requisite in an Arborist, as well for all other woods as for an Orchard.

CHAP. II.

Of the right dressing of Trees.

Necessity of
dressing trees.

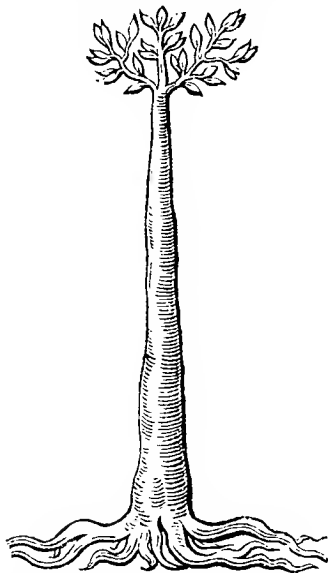
IF all these things afore-said were indeed performed, as we have shewed them in words, you should have a perfect Orchard nature and substance, begun to your hand: And yet are all these things nothing, if you want that skill to keep and dress your Trees. Such is the condition of all earthly things, whereby a man receiveth profit or pleasure, that they degenerate presently.

ly without good ordering. Man himself left to himself, growes from his heavenly and spirituall generation, and becometh beastly, yea, devilish to his own kind, unlesse he be regenerate. No marvell then, if Trees make their shoots, and put their sprays disorderly. And truly, (if I were worthy to judge) there is not a mischief that breedeth greater and more generall harme to all the Orchard, (especially if they be of any continuance) that ever I saw, (I will not except three) then the want of the skilfull dressing of trees. It is a common and unskillfull opinion, and saying, Let all grow, and they will bear more fruit: and if thou lop away superfluous boughs, they say, what a pitty is this? how many Apples would these have borne? not considering, there may arise hurt to your Orchard, as well (nay rather) by abundance as by want of wood. Sound and thriving plants in a good soile will ever yield too much wood, and disorderly, but never too little. So that a skillfull and painfull Arborist need never want matter to effect a plentifull and well drest Orchard; for it is an easie matter so take away superfluous boughs, (if your Gardener have skill to know them) whereof your plants will yield abundance, and skill will leave sufficiently well ordered. All ages both by rule and experience do consent to a pruning and lopping of Trees: yet have not any that I know described unto us, (except in dark and generall words) what or which are those superfluous boughs, which we must take away, and that is the chiefe and most needfull point to be known in lopping. And we may well assure ourselves, (as in all other Arts, so in this) there is a vantage and dexterity by skill, and an habit by practise out of experience, in the performance hereof, for the profit of mankind; yet know not I know, (let me speak it with the patience of our cunning Arborists) any thing within the compass of human affaires so necessary, and so little regarded, not only in Orchards, but also in all other timber Trees, where, or whatsoever.

How many forests and woods wherein you shall have for one Timber wood fully thriving Tree, four (nay sometimes twenty four) evill ^{Timber wood} evil drest, ^{evil drest} dying, Rotten and dying Trees, even while they live? and in stead of trees, thousands of bushes and shrubs. What rottennesse, what hollownesse, what dead armes, withered tops, curtailed trunks, what loads of mosses, drooping boughs? and dying branch-

branches you shall see every where? And those that are like in this sort are in a maner all unprofitable boughs, cankered armes, crooked, little and short boals; what an infinite number of bushes, shrubs, and skrogs of hazels, thornes, and other profitable wood, which might be brought by dressing to become great and goodly trees? Consider now the cause: The lesser wood hath been

The cause of
hurts in woods



Imagine the Root to be spread far wider.
spoiled with circleffe, unskilfull, and untimely stowing, and much also of the great wood. The greater trees at the first rising have filled and over-laden themselves with a number of wastfull boughs

boughs and suckers, which have not only drawn the sap from the boale, but also have made it knotty, and themselves and the boale mossie for want of dressing, whereas if in the prime of growth they had been taken away close, all but one top (according to this pattern) and clean by the bulke, the strength of all Dresse timber trees how. the sap should have gone to the bulke, and so he would have recovered and covered his knots, and have put forth a faire long and straight body, (as you see) for timber profitable, huge, great of bulke, and of infinite last.

If all Timber Trees were such (will some say) how should we have crooked wood for wheels, &c.

Answer. Dresse all you can, and there will be enough crooked for those uses.

More then this, in most places, they grow so thick, that neither themselves, nor earth, nor any thing under or neer them can thrive, nor Sun, nor Rain, nor Aire can do them, nor any thing neer or under them, any profit or comfort.

I see a number of Hags, where, out of one Root you shall see three or four, (nay more, such is mens unskilfull greedinesse, who desiring many, have none good) pretty Oakes or Ashes straight and tall, because the Root at the first shoot gives sap a-maine: but if one onely of them might be suffered to grow, and that well and cleanly pruned, all to his very Top, what a Tree should we have in time? And we see by those Roots continually and plentifully springing, notwithstanding so deadly wounded, what a commodity should arise to the owner, and the Commonwealth, if wood were cherished, and orderly dressed.

The waste boughs closely and skillfully taken away, would give us store of fences and fuel, and the bulke of the Tree in time Profit of trees dressed. would grow of huge length and bignesse. But hee (me-thinks) I hear an unskilfull Arborist say, that Trees have their severall forms, even by nature, the Pear, the Holly, the Aspe, &c. grow long in bulke with few and little armes, the Oke by nature broad, and such like. All this I grant, but grant me also, that there is a The end of trees. profitable end and use of every Tree, from which if it decline, (though by nature) yet man by art may, (nay must) correct it. Now other end of Trees, I could never learn, then good Timber; fruit much and good, and pleasure, uses physicall hinder nothing a good form.

Nai-

Trees will take
any forme.

Neither let any man so much as think, that it is unprofitable, much lesse unpossible, to reform any Tree of what kind soever. For (believe me) I have tryed it, I can bring any tree (beginning betimes) to any form. The Peare and Idolly may be made to spread, and the Oke to cloze.

The end of
trees,

But why do I wander out of the compasse of mine Orchard into the Forrests and Woods? Neither yet am I from my purpose, if heals of timber-trees stand in need of all the say, to make them great and straight, (for wrong growth and dressing makes strong trees) then it must be profitable for fruit, (a thing more immediately serving a mans need) to have all the sap his Root can yield: for as timber, sound, great, and long, is the *good of timber Trees*, and therefore they bear no fruit of worth: so fruit, good, sound, pleasant, great and much, is the end fruit Trees. That gardner therefore shall perform his duty skilfully and faithfully, which shall so dress his Trees, that they may bear such and such store of fruit, which he shall never do, (I dare undertake) unless he keep this Order in dressing his Trees.

How to dresse
a fruit tree.

A fruit Tree so standing, that there need none other end of dressing but fruit, (not Ornaments, nor walks, nor delight to such as would please their eye only, and yet the best form cannot but both adorne and delight) must be parted from within two foot or thereabouts, of the earth, so high to give liberty to dresse his Root, and no higher, for drinking up the sap that should feed his fruit, for the bough will be first, and best served and fed, because he's next the Root, and of greatest waxe and substance, and that makes him longest of Life: into two, three, or foure armes, as your stocke or grasses yield twigs, and every arme into two or more branches, and every branch into his severall syons, still spreading by equall degrees, so that his lowest spray be hardly without the reach of a mans hands, and his highest be not past two yards higher, rarely, (especially in the middle) that no one twig touch his fellow. Let him spread as farre as he list without his master-bough, or top equally. And when any bough doth grow sadder, and fall lower then his fellows, (as they will with weight of fruit) ease him the next spring of his superfluous twigs, and he will Rise: when any bough or spray shall amount above the rest; either snub his top with a nip be-
twixt

twixt your finger and your thumb, or with a sharp knife, and take him clean away, and so you may use any Cyon you would reforme; and as your tree growes in stature and in strength, so let him rise with his top: but slowly, and early, especially in the midst, and equally, and in breadth also; and follow him upward with lopping his under growth and water boughs, keeping the same distance of two yards, but not above three in any wise, betwixt the lowest and the highest twigs.

1. Thus you shall have well liking, clean-skind, healthfull, great, and long-lasting trees. Benefits of good dressing.
Remedy.

2. Thus shall your tree grow low, and safe from winds, for his top will be great, broad, and weighty.

3. Thus growing broad, shall your trees bear much fruit (I dare say) one as much as six of your common trees, and good without shadowing, dropping and fretting; for his boughs, branches, and twigs shall be many, and those are they (not the boal) which bear fruit.

4. Thus shall your boal being little (not small, but low) by reason of his shortnesse, take little, and yeeld much sap to fruit.

5. Thus your trees by reason of strength in time of setting shall put forth more blossomes and more fruit, because free from taints (for strength is a great help to bring forth much) and safely, whereas weaknes failes in setting, though the season be calm.

Some use to bare trees Roots in Winter, to stay the setting till hotter seasons, which I discommend, because

1. They hurt the Roots.

2. It stayes nothing at all.

3. Though it did, being small, with us in the North they have their part of our April and May Frosts.

4. Hinderance cannot profit weak trees in setting.

5. They waste much labour.

6. Thus shall your tree be easie to dresse, and without danger, either to the tree or the dresser.

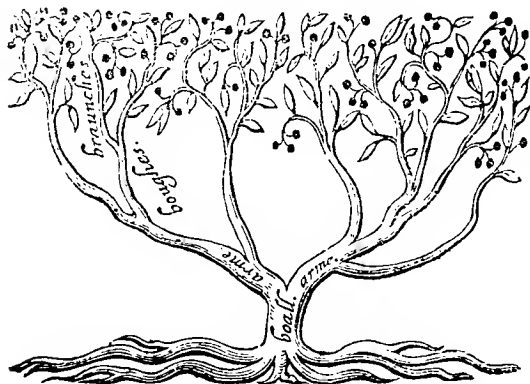
7. Thus may you safely and easily gather your fruit without falling, bruising, or breaking of Cyons.

This is the best form of a fruit tree, which I have here shadowed

dowed out for the better capacity of them that are led more with the eye, then the mind, craving pardon for the deformity, because I am nothing skilfull either in the painting or carving.

Imagine that the paper makes but one side of the tree to appear, the whole round compass will give leave for many more armes, boughs, branches, and cyons.

The perfect form of a Fruit-tree.



If any tree cannot well be brought to this form : *Experto crede Roberto*, I can shew divers of them under twenty years of age.

Time best for
Proyning.

The fittest time of the Moon for proyning, is, as of grafting, when the sap is ready to stir (not proudly stirring) and so to cover the wound and of the year, a month before (or at least when) you graffe. These Peares, Apricocks, Peaches, Cherries, and Bullies sooner. And old trees before young plants, you may dress at any time betwixt Leaf and Leaf. And note where you take any thing away, the sap the next Summer will be putting : Be sure therefore when he puts a bud in any place where you would not have him, rub it off with your finger.

And

And here you must remember the common homely proverb : Dressing be-
Some crookes the tree time.
That good Canrell me it be.

Begin betimes with trees, and do what you list : but if you let them grow great and stubborn, you must do as the tree list. They will not bend but break, nor be wound without danger. A small branch will become a bough, and a bough an arme in bignesse. Then if you cut him, his wound will fester, and hardly without good skill recover : therefore, *Obsta principis*. Of such Faults of evill wounds, and lesser, or any bough cut off a handfull or more from dress trees, and the body, comes hollownasse, and untimely death. And there- the remedy.
 fore when you cut, strike close, and clean, and upward, and leave no bunch.

This forme in some cases sometimes may be altered : If your The form al-
 tree, or trees, stand neer your walks, if it please your fancy more, tereth.
 let him not break till his boale be above your head : so may you walk under your trees at your pleasure. Or if you set your fruit trees for your shades in your Groves, then I respect not the forme of the tree but the comelinesse of the walk.

All this hitherto spoken of dressing, must be understood of Dressing of old
 young plants, to be formed : it is meet somewhat be said for the trees.
 instruction of them that have old trees already formed, or rather deformed : for *Malum non vitatur nisi cognitum*. The faults therefore of a disordered tree, I find to be five.

1. An unprofitable boale.
2. Water boughs.
3. Fretters.
4. Suckers. And,
5. One principal top.

Faults are
 five, and their
 remedies.

A long boale asketh much feeding, and the more he hath the Long boale.
 more he d fires, and grows, as a drunken man drink, or a covetous man wealth,) and the lesse remains for the fruit ; he puts his boughs into the ayre, and makes them, the fruit and it self more No remedy.
 dangered with winds ; for this I know no remedie, after that the tree is come to growth ; once evill, never good.

Water boughes, or under growth, are such boughes as grow I. Water
 low under others, and are by them over-grown, over-shadowed, boughes.
 dropped on, and pinde for want of plenty of sap, and by that
 F 2 means

means in time dye: For the sap presseth upward : and it is like water in her course, where it findeth most issue, thither it floweth, leaving the other lesse fluices dry, even as wealth to wealth, and much to more. These so long as they bear, they bear lesse, worse and fewer fruit, and waterish.

Remedic. The Remedy is easie, if they be not grown greater than your arme, lop them close and clean, and cover the middle of the wound ; the next Summer when he is dry, with a salve made of tallow, tarre, and a very little pitch, good for the covering of any such wound of a great tree : unlesse it be bark pild, and then a scar cloth of fish butter, hony and waxe presently (while the wound is green) applyed, is a soveraign remedy, in Summer especially. Some bind such wounds with a thumb Rope of hay moist, and rub it with dung.

Bark pild, and the remedie.

Preventers.

Preventers are, when as by negligence of the Gardner, two or more parts of the tree, or of divers trees, as armes, boughs, branches, or twigs, grow so neer and close together, that one of them by rubbing doth wound one another. This fault of all or the shew the want of skill (or care at least) in the arborist : for here the hurt is apparent, and the remedye easie, seen to, betimes : galls are wounds incurable, but by taking away those members : for let them grow, and they will be worse and worse, and to kill themselves with civill strife for Roomth, and danger the whole tree. Avoid them betime therefore, as a Common-wealth doth busome enemies.

Touching.

Remedic.

Suckers.

A Sucker is a long, proud, and disorderly Cyon, growing streight up (for pride of sap makes proud, long, and streight growth) out of any lower parts of the tree, receiving a great part of the sap, and bearing no fruit, till it have tyrannized over the whole tree. These are like idle and great Drones amongst Bees and proud and idle members in a Common-Wealth.

The Remedy of this is, as of water boughs, unlesse they be grown greater than all the rest of the boughs ; and then your Gardner (at your discretion) may leave him for his boale, and take away all, or the most of the rest. If he by little slip him, and set him, perhaps he will take : my fairest Apple tree was such a

One principal slip.

top or bough, and Remedy.

One or two principall top boughes are as evill. in a manner as suckers ; they rise of the same cause, and receive the same Remedy :

medy ; yet these are more tolerable, because these bear fruit, yea the best: but Suckers of long time do not bear.

I know not how your tree should be faulty, if you reforme ^{Instruments} all your vices timely, and orderly. As these Rules serve for dress- ^{for dressing.} ing young trees, and sets in the first setting: so may they well serve to help old trees, though not exactly to cure them.

The instruments fittest for all these purposes, are most commonly, for the greatest trees, an handsome, long, light Ladder of Firpole, a little, nimble and strong armed Saw, and sharpe. For lesse trees, a little and sharpe hatchet, a broad mouthed Chisel, strong and sharp, with an hand beerle, yo or strong and sharp Clever, with a knock, and (which is a most necessary instrument amongst little trees) a great hasted and sharp knife or whittle. And as needfull is a Stool on the top of the Ladder of eight or more rungs, with two back feet, whereon you may safely, and easily stand to graffe, to dresse, and to gather fruit, thus formed. The feet may be fast wedged in: but the Ladder must hang loose with two bands of Iron, and thus much of dressing trees for fruit, formally to profit.



CHAP. XII.

Of Soyling.

THere is one thing yet very necessary for to make your Orchard both better, and more lasting: Yea so necessary, that ^{Necessity of} without it your Orchard cannot last, nor prosper long, which ^{soyling.} is neglected generally both in precepts and in practise, viz. manuring with soyl: whereby it hapneth that when trees (amongst other evils) through want of fatnesse to feed them, become mofie, and in their growth are evil (or not thriving) it is either attributed to some wrong cause, as age (when indeed they are but young) or evill standing (stand they never so well) or such like, or else the cause is altogether unknown, and so not amended.

Can there be devised any way by nature, or art, sooner or soundlier to suck out, and take away the heart of earth, then by great trees; such great hodyes cannot be sustained without great store of sap? what living body have you greater then of trees; the great Sea monsters (whereof one came at land at *Teesmouth*

Trees great
Suckers.

in *Yorkeſhire*, hard by us, 18 yards in length, and neer as much in compaſſe) ſeeme hideous, huge, ſtrange, and monſtrous, becauſe they be indeed great, but eſpecially, becauſe they are ſeldom ſeen : but a tree liking, come to his growth and age, twice that length, and of a bulk never ſo great, beſides his other parts, is not admired, becauſe he is ſo commonly ſeen. And doubt not, but if he were well regarded from his kernell, by ſucceeding ages, to his full ſtrength, the moſt of them would double their meaſure. About fifty yeers agoe, I heard by credible and conſtant reports, That in *Bolſham Parke* in *Weſtmerland*, neer unto *Pemuth*, there lay a blown Oak, whoſe trunk was ſo bigge, that two Horſe-men being the one on the one ſide, and the other on the other ſide, they could not ſee one another : to which if you add his arms, boughs, & roots, & conſider of his height, what would he have been, if preſerved to the vantage ? Alſo I read in the *Hiſtory of the Weſt-Indians*, out of *Peter Martyr*, that ſixteen men taking hands one with another, were not able to fathome one of thoſe trees about. Now nature having given to ſuch, a faculty by large and infinite Roots, taws and tangles, to draw immediately his ſuſtenance from our common mother the earth (which is like in this poynt to all other mothers that bear) hath alſo ordained that the tree over loaden with fruit, and wanting ſap to feed all the hath brought forth, will waite all the cannot feed, like women bringing forth more Children at once than ſhe hath teats. See you not how trees eſpecially, by kind being great, ſtanding ſo thick and cloſe, that they cannot get plenty of ſap, pine away all the graſs, weeds, leſſer ſhrubs and trees ; yea, and themſelves alſo, for want of vigour off ſap : ſo that trees growing large, ſucking the ſoyl whereon they ſtand continually and amaine, and the ſoylon of the earth that feeds them decaying (for what is there that waſtes continually, that ſhall not have an end ?) muſt either have ſupply of ſucking, or elſe leave thriving and growing. Some grounds will bear corn while they be new, and no longer, becauſe their ciſt is ſhallow, and not very good, and lying they ſcind and waſh and become barren. The ordinary corn ſoyls continue not fertile, without fallowing & ſoyling, and the bulk requires ſupply even for the little body of corn. How then can we think that a-

ny Ground how good soever can sustain bodies of such greatness, and such great feeding, without great plenty of sap arising from good earth ? This is one of the chief causes why so many of our Orchards in England are so evill thriving when they come to growth, and our fruit so bad. Men are loath to bestow much ground, and desire much fruit, and will neither set their trees in sufficient compass, nor yet feed them with manure. Therefore of necessity Orchards must be soyled.

Great bodies

The fittest time is, when your trees are grown great, and have neer hand spread your earth, wanting new earth to sustaine them, which if they do, they will seek abroad for better earth ; and shun that which is barren (if they find better) as cattell evill pasturing. For nature hath taught every creature to desire and seek his own good, and to avoid hurt. The best time of the year is at the fall, that the frost may hite and make it tender, and the Rain wash it into the roots. The Summer time is perilous if ye dig, because the sap stirs amain. The best kind of soyl is such as is fat, hot, and tender. Your earth must be lightly opened, that the Dung may go in, and wash away ; and but shallow, lest you hurt the Roots ; and in the spring, closely and equally made plain again for fear of Suckers. I could wish, that after my trees have fully possessed the soyl of mine Orchard, that every seven years at least, the soyl were bespread with dung half a foot thick at least. Puddle water out of the Dughill poured on plentifully, will not only moisten but fatten exceedingly in *June*, and *July*. If it be thick and fat, and applied every year, your Orchard shall need none other soiling. Your ground may lye fallow at the River side, that the flood standing some dayes and nights thereon, shall save you all this labour of soyling.

C H A P. XII.

Of Annoyances.

A Chief help to make every thing good, is to avoid the evils thereof : you shall never attain to that good of your Orchard you look for, unlessse you have a Gardener that can discern the diseases of your trees, and other annoyances of your Orchard, and find out the causes thereof, and know and apply fit Remedies for the same. For be your ground such plants and trees as you would not, and if they be wasted with hurtfull things, what have

have you gained, but your labour for your travel? It is with an Orchard and every tree, as with mans body. The best parts of physick for preservation of health, is to foresee and cure diseases.

Two kinds of evils in an Orchard.

All the diseases of an Orchard are of two sorts, either internal, or external. I call those inward hurts which breed on, and in, particular trees.

1 Gall.

5 Bark bound.

2 Canker.

6 Bark pild.

3 Mofse.

7 Worm.

4 Weaknesse in setting

8 Deadly wounds.

Galls.

Galls, Cankers, Mofse, Weaknesse, though they be divers diseases, yet (howsoever authors think otherwise) they rise all out of the same cause.

Galls we have described with their cause and remedy, in the eleventh Chapter under the name of fretters.

Canker.

Canker is the consumption of any parts of the tree barke and wood; which also in the same place is deciphered under the title of water-boughs.

Mofse.

Mofse is sensible seen and known of all, the cause is poynted out in the same Chapter, in the discourse of timber wood, and partly also the remedy: but for Mofse adde this, that any time in summer (the spring is best; when the cause is removed) with an Hair cloth immediately after a shoure of rain, rub off your Mofs or with a piece of wood (if the mofse abound) formed like a great knife.

Weaknesse in setting.

Weaknesse in the setting of your fruit shall you find there also in the same Chapter, and his remedy. All these flow from the want of Roomth in good soyl, wrong planting, Chapter seven, and evil, or no dressing.

Bark-bound.

Bark bound as I think riseth of the same cause, and the best and present remedy (the causes being taken away) is with your sharp knife in the spring, length way to launce his bark thorow-out 3 or 4 sides of his boult.

Worm.

The disease called the worm is thus discerned: the bark will be hollow in divers places like gall, the wood will dye and dry, and you shall see easily the bark swell: it is verily to be thought that therein is bred some Worm. I have not yet thorowly sought it out, because I was never troubled therewithall: but only

only have seen such trees in divers places. I think it a Worme rather, because I see this disease in trees, bringing fruit of sweet taste, and the swelling shewes as much. The remedy (as I conjecture) is, so soon as you perceive the wound, the next Spring cut it out bark and all, and apply Cows pisse and vinegar presently, and so twice or thrice a week, for a moneths space: For I well perceive, if you suffer it any time, it eates the Tree or bough round, and so kills. *Since I first wrote this treatise, I have changed my mind concerning the disease called the worm, because I read in the History of the West-Indians, that their Trees are not troubled with the disease called the Worm or Canker, which ariseth of a raw and evil concoited humor or sap. Whence Pliny: by reason the Canry is more hot then ours; wherefore I think the best remedy is (as disallowing the former, considering that the Worme may breed by such an humor) in a masticke, soure lopping, and good dressing.*

Bark-pill'd, you shall find with his remedy, in the eleventh Chapter.

Deadly wounds are, when a mans *Chorist* wanting skill, cuts off armes, boughes or branches an inch, or (as I see sometimes) an handfull, or halfe a foot or more from the body: *these so cut, cannot cover in any time with sap, and therefore they dye, and dying they perishe the heart, and so the tree becomes hollow, and with such a deadly wound cannot live long.* Wounds.
Remedy.

The remedy is, if you find him before he be perished, cut him close, as in the 11. Chapter: if he be hoal'd, cut him close, fill his wounds though never so deep, with morter well tempered, and so close at the top his wound with a Sear-cloth nailed on that no Ayr nor Ruin approach his wound. If he be very old and declining, he will recover: and the hole being closed, his wound within shall not hurt him for many years.

Hurts on your trees are chiefly, Ants, Earwigs, and Caterpillars. Of Ants and Earwigs is said, Chap. 10. *Let there be no swarms of Ants nor Earwigs on your tree-tops, no nor in your Orchard: turn them over in a froth, and pour in water, and you kill them.*

For Caterpillars, the vigilant Fruiterer shall soone espy their lodging by their web, or the decay of leaves eaten round about them. And being seen, they are easily destroyed with your hand,

or rather (if your tree may spare it) take sprig and all : for the red speckled Butter-fly doth ever put them, being her sperms, among the tender sprays for better feeding ; especially in drought : and tread them under your feet. I like nothing of smoak among trees. Unnaturall heats are nothing good for naturall trees. *This, for Diseases of particular trees.*

Externall hurts are either things naturall, or artificiall. Naturall things, externa ly hurting Orchards.

1 Beasts.	1 Deer.	11 Birds.	1 Bullfinch.
	2 Goats.		2 Thrush.
	3 Sheep.		3 Black-bird.
	4 Hare.		4 Crow.
	5 Cony.		5 Pye,
	6 Cattell.		&c.
	7 Horfe.		

The other things are.

- 1 Winds.
- 2 Cold.
- 3 Trees.
- 4 Weeds.
- 5 Wormes.
- 6 Moles.
- 7 Filth.
- 8 Poysonfull smoke.

Externall wilsfull evils are these.

- 1 Walls.
- 2 Trenches.
- 3 Other works noisome, done in or neer your Orchard.
- 4 Evill Neighbours.
- 5 A carelesse Master.
- 6 An undiscereet, negligent, or no keeper.

See you here an whole Army of mischiefs banded in troops against the most fruitfull trees the earth beares ? assailing your good labours. Good things have most enemies.

Remedy.

A skilfull Fruiterer must put to his helping hand, and disband and put them to flight.

Deere, &c.

For the first rank of beasts, besides your out strong fence, you must have a faire and swift Grey-hound, a Stone-baw Gun, and if

if need require, an Apple with an hook for a Deer, and an hare-tipe for an Hare.

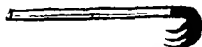
Your Cherries, and other Berries, when they be ripe, will draw ^{Birds,} all the Black-birds, Thrushes, and Mag-pies, to your Orchard. The Bill-finch is a devourer of your fruit in the bud, I have had whole Trees that'd out with them in Winter time.

The best remedy here is a Stone-Bow, a Piece, especially if you have a musket, or sparrow-hawke in winter to make the Black-bird stoop into a bush or hedge.

The Gardener must cleanse his soile of all other trees, but fruit trees, as aforesaid. *chap. 2.* for which it is ordained; and I would especially name Oaks, Elms, Ashes, and such other great wood, but that I doubt it should be taken as an admission of lesser trees, for I admit of nothing to grow in my Orchard but fruit and flowers: if sap can hardly be good to feed our fruit trees, should we allow of any other? especially those that will become their Masters, and wrong them in their lively-hood?

And although we admit without the fence, of wall-nuts in most ^{Winds.} plain places, Trees middle most, and Ashes or Oaks, or Elms utmost, set in comely rows equally distant, with fair Allies twice row and row, to avoid the boisterous blasts of winds, and within them also others for bees, yet we admit none of these into your Orchard plat: other remedies then this have we none against the ^{Frosts,} nipping frost.

Weeds in fertile soil, (because the generall course is so) till ^{Weeds,} your trees grow great, will be noisome, and deform your allies, walks, beds, and squares; your under gardeners must labour to keep all cleanly and handsome from them, and all other filth, with a spade, weeding knives, rake with Iron teeth, a scruple of Iron thus formed.



For Nettles, and ground Ivy after a shower.

When weeds, straw, sticks, and all other scrapings are gathered together, burn them not, but bury them under your crust in any place of your Orchard, and they will dye and fatten your ground.

Wormes.
Moles.

Wormes and Moales open the earth, and let in ayre to the Roots of your trees, and deform your squares and walks; and feeding in the earth, being in number infinite, draw on barrenesse.

Remedy.

Wormes may easily be destroyed. Any Summer evening when it is dark, after a shrowe with a candle you may fill bushels, but you must tread nimble, and where you cannot come to catch them, so sift the earth with coal-ashes an inch or two thicknesse, and that is a plague to them, so is sharp gravell.

Moales will anger you, if your Gardener or some other moal-catcher ease you not; especially, having made their fortresses among the Roots of your Trees; you must watch her well with a Moal-speare, at morning, noon, and night: when you see her utmost hill, cast a trench betwixt her and her home, for she hath a principall mansion to dwell and breed in about April, which you may discern by a principall hill, wherein you may catch her, if you trench it round and sure, and watch well; or wheresoever you can discern a single passage, (for such she hath) there trench, and watch, and have her.

Wilfull annoyances must be prevented and avoided by the love of the Master and Fruiterer, which they bear to their Orchard.

Justice and liberality will put away evill neighbours, or evill neighbour-hood. And then, (if God blesse and give successe to your labours) I see not what hurt your Orchard can sustain.

CHAP. XIII.

The age of trees.

IT is to be considered, All this treatise of trees tends to this end, that men may love and plant Orchards, whereunto there cannot be a better inducement then that they know, (or at least be perswaded) that all the benefit they shall reape thereby, whether of pleasure or profit, shall not be for a day, or a moneth, or one, or many, but many hundred years. Of good things, the greatest, and most durable, is alwayes the best. If therefore, out of reason grounded upon experience, it be made, (I think) manifest, but I am sure probable, that a fruit tree in such a soyle
and

and site, as is described, so planted and trimmed, and kept as is afore appointed, and duely soiled, shall dure a thousand years, why should we not take pains, and be at two or three years charges, (for under seven years will an Orchard be perfected for the first planting, and in that time be brought to fruit) to reap such a commodity, and so long lasting? The age of trees.

Let no man think this to be strange, but peruse and consider the reason. I have Apple trees standing in my little Orchard, which I have known these fourty years, whose age before my time I cannot learn, it is beyond memory, though I have inquired of divers aged men of 80 years and upwards: these trees although come into my possession very ill ordered, and mishappen, and one of them wounded to his heart, and that deadly, (for I know it will be his death) with a wound, wherein I might have put my foot into the heart of his bulke, (now it is lesse) notwithstanding, with that small regard they have had since, they so like, that I assure my selfe they are not come to their growth by more then two parts of three, which I discern not onely by their own growth, but also by comparing them with the bulke of other trees. And I find them short (at least) by so many parts in bignesse, although I know those other fruit trees to have been much hindred in their stature by evill guiding. Here hence I gather thus. Gathered by reason out of experience.

If my trees be a hundred years old, and yet want two hundred of their growth before they leave increasing, which make three hundred, then must we needs resolve, that this three hundred years are but the third part of a trees life: because, (as all things living besides) so trees must have allowed them for their increase one third, another third for their stand, and a third part of time also for their decay. All which time of a tree amounts to nine hundred years; three hundred for increase, three hundred for his stand, whereof we have the terme [stature] and three hundred for his decay: and yet I thinke, (for we must conjecture by comparing, because no one man liveth to see the full age of trees) I am within the compass of his age, supposing alwaies the fore-said means of preserving his life. Consider the age of other living Creatures. The Horse, and moidled Oxe, wrought to an untimely death, yet double the time of their increase.

crease. A dog likewise increaseth three, stands three at least, and in as many (or rather more) decayes.

Mans age.

Every living thing bestowes the least part of his age in his growth; and so must it needs be with trees. A man comes not to his full growth and strength (by common estimation) before thirty years, and some slender and clean bodies, not till forty: so long also stands his strength, and so long also must he have allowed by course of nature to decay. Ever supposing that he be well kept with necessities, and from and without stings, bruises, and all other dominating diseases. I will not say upon true report, that Physick holds it possible, that a clean body kept by these three Doctors, *Doctor Dye*, *Doctor Quiet* and *Doctor Merryman*, may live near a hundred years. Neither will I here urge the long years of *Methuselah*, and those men of that time, because you will say, Mans dayes are shortened since the flood. But what hath shortened them? God for mans sins; but, by mans: as want of knowledge, evill Government, Riot, Gluttony, Drunkenness, and (to be short) the encrease of the curse, our sins increasing in an Iron and wicked age.

Now if a man, whose body is nothing (in a manner) but tender rottenness, whose course of life cannot by any meanes, by Counsell, restraint of Lawes or punishment, nor hope of praise, profit, or eternall glory, be kept within any bounds, who is degenerate clean from his naturall feeding, effeminate niceness, and cloying his body with excess of meat, drink, sleep, &c. and to whom nothing is so pleasant, and so much desired, as the causes of his own death, as idleness, lust, &c. may live to that age: I see not but a tree of a solid substance; not dammified by heat or cold, capable of, and subject to any kind of ordering or dressing, that a man shall apply unto him, feeding naturally, as from the beginning, disburdened of all superfluities, eased of, and of his owne accord avoiding, the causes that may annoy him, should double the life of a man, more then twice told: and yet naturall Philosophy, and the universall consent of all Histories tell us, that many other living creatures far exceed man in length of years: As the Hart, and the Raven. Thus reporteth that famous *Revelator* out of *Hesiodus*, and many other Historiographers. The testimony of *Cicero* in his book *De Senectute*, is weighty to this

this purpose: that we must *in posteris aetates ferere arbore;* which can have none other sense, but, that our fruit trees whereof he speaks, can indure for many ages.

What else are trees, in comparison with the earth, but as hairs to the body of a man? And it is certain, without poysoning, evil and distemperate dyet, and usage, or other such forcible cause, the hairs dure with the body. That they be called excrements, it is by reason of their superfluous growth: (for cut them as often as you list, and they will still come to their naturall length) Not in respect of their substance, and nature. Hairs endure long, and are an ornament, and of use also to the body, as trees to the earth.

So that I resolve upon good reason, that fruit trees well ordered, may live and like a thousand years, and bear fruit; and the longer, the more, the greater, and the better, because his vigour is good and stronger, when his years are many. You shall see old trees put forth their buds and blossomes both sooner and more plentiful then young trees, by much. And I sensibly perceive my young trees to enlarge their fruit as they grow greater, both for number and greatnesse. Young Heifers bring not forth Calves so fair, neither are they so plentiful to milke, as when they be come to be old Kine. No good Haus-wife will breed of a young, but of an old breed-mother: It is so in all things naturally, therefore in trees.

And if fruit trees last to this age, how many ages is it to be supposed, strong, and huge timber trees will last? whose huge bodies require the years of divers *Atreides*, before they end their dayes, whose sap is strong and bitter, whose barke is hard and thick, and their substance solid and stiffe: all which, are defences of health and long life. Their strength withstands all forcible winds, their sap of that quality is not subject to wormes and tainting. Their bark receives seldom or never by casualty, any wound. And not only so, but he is free from removals, which are the death of millions of trees, whereas the fruit-tree in comparison, is little and often blown down, his sap sweet, easily, and soon tainted, his bark tender, and soon wounded, and himselfe used by man, as man useth himself, that is, either unskillfully or carelessly.

Age of trees
discerned.

It is good for some purposes, to regard the age of your fruit trees, which you may easily know, till they come to accomplish twenty years, by his knots: Reckon from his Root upward an arme, and so to his top twig, and every years growth is distinguished from other by a knot, except lopping or removing do hinder.

CHAP. XV.

Of gathering and keeping Fruit.

Generall rule.

Although it be an easie matter, when God shall send it, to gather and keep fruit, yet are there certaine things worthy your regard. You must gather your fruit when it is Ripe, and not before, else will it wither, and be tough and sowre. All fruits generally are Ripe, when they begin to fall. For trees doe as all other bearers doe, when their young ones are Ripe, they will wain them. The Dove her Pigeons, The Coney her Rabbers, and Women their Children. Some fruit-trees sometimes getting a taint in the setting with a frost or evill wind, will cast his fruit untimely, but not before he leave giving them sap, or they leave growing. Except from this fore-said rule. Cherries, Damsons, and Bullies. The Cherry is Ripe when he is swelled, wholly Red, and sweet. Damsons and bullies not before the first frost.

Apples.

Apples are known to be Ripe, partly by their colour growing towards a yellow, except the Leather-coate, and some Peares, and greenings.

When.

Timely Summer fruit will be ready, some at Midsummer, most at Lammas for present use; but generally no keeping fruit before *Michael tide*. Hard winter fruit, and Wardens longer.

Gather at the full of the Moon, for keeping, gather dry for fear of Rotting.

Dry stalkes.

Gather the stalks withall: for a little wound in fruit is deadly, but not the stump, that must bear the next fruit; nor leaves, for moisture putrifies.

Severally.

Gather every kind severally by it self, for all will not keep alike, and it is hard to discern them, when they are mingled.

Over-laden
trees.

If your trees be over-laden, (as they will be, being ordered, as is before taught) I like better of pulling some off, (though they be

be not ripe) neer the top end of the bough, then of propping by much, the rest shall be better fed. Propping puts the boughs in danger, and frets it at least.

Instruments : A long Ladder of light Fir, a Stool ladder as *Instruments.* in the eleventh Chapter. A gathering-apron like a poak before you, made of purpose, or a Wallet hung on a bough, or a basket with a sieve bottome, or skin bottome, with lathes or splinters under, hung in a rope to pull up and down : bruise none, every *Bruises.* bruise is to fruit, death : if you do, use them presently ; an hook to pull boughs to you is necessary, break no boughs.

For keeping, lay them in a dry loft, the longest keeping Apples *Keeping.* first and furthest on dry straw, on heaps, ten or fourteen dayes, thick, that they may sweat. Then dry them with a soft and clean cloth, and lay them thin abroad. Long keeping fruit would be turned once in a month softly : but not in, nor immediatly after frost. In a loft, cover'd well with straw, but rather with chaffe or bran : For frost doth cause tender rottenness.

CHAP. XVI.

Of Profits.

NOW pause with your selfe, and view the end of all your Labours in an Orchard : unspeakable pleasure, and infinite commodity. The pleasure of an Orchard I refer to the last Chapter, for the conclusion ; and in this Chapter, a word or two of the profit, which thorowly to declare is past my skill ; & I account it as if a man should attempt to adde light to the Sun with a candle, or number the starres. No man that hath but a mean Orchard or judgment but knowes, that the commodity of an Orchard is great : Neither would I speak of this, being a thing so manifest to all : but that I see, that through the carelesnesse of men, it is a thing generally neglected. But let them know, that they lose hereby the chiefest good which belongs to house-keeping.

Compare the Commodity that cometh of half an acre of ground, set with fruit-trees and hearbs, so as is prescribed, and an whole acre (say it be two) with corn, or the best commodity you can wish, and the Orchard shall exceed by divers degrees.

In France and some other Countries, and in England, they Cyder and make great use of Cider and Perry, thus made : dresse every Perry, apple, the stalke, upper end, and all galls away, stamp them, and

strain them, and within twenty four hours tun them up into clean, sweet, and sound vessels, for fear of evill aire, which they will readily take : and if you hang a poakfull of Cloves, Mace, Nutmegs, Cinamon, Ginger, and peels of Lemons in the midst of the vessel, it will make it as wholsome and pleasant as Wine. The like usage doth Perry require.

These drinks are very wholsome ; they cool, purge, and prevent hot agues. But I leave this skill to Physicians.

Fruit. The benefit of your Fruit, Roots, and Herbs, though it were but to eat and sell, is much.

Water. Water distilled of Roses, Woodbind, Angelica, are both profitable, and wondrous pleasant, and comfortable. Saffron and Lycoras will yeeld you much.

Conserve. Conserve, and preserves, are ornaments to your feasts, health in your Sicknesse, and a good help to your friend, and to your purse.

He that will not be moved with such unspeakable profits, is well worthy to want, when others abound in plenty of good things.

CHAP. XVII.

Ornaments.

ME thinks hitherto we have but a bare Orchard for fruit. And but half good, so long as it wants those comely Ornaments that should give beauty to all our labours, and make much for the honest delight of the owner and his friends.

**Delight the
chief end of
Orchards.**

For it is not to be doubted, but as God hath given man things profitable, so hath he allowed him honest comfort, delight, and recreation in all the works of his hands. Nay, all his labours under the Sun without this are troubles, and vexations of mind : For what is greedy gain, without delight, but moyling, and turmoiling in slavery : But comfortable delight, with content, is the good of every thing and the pattern of heaven. A morsel of bread with comfort, is better by much than a fit Oxe with unquietnesse. And who can deny but the Principal end of an Orchard, is the honest delight of one wearied with the works of his lawfull calling ? The very works of, and in an Orchard and Garden, are better than the ease and rest of, and from other labours. When God had made a man after his own

**An Orchard
delightome.**
-11-

image,

Image, in a perfect state, and would have him to represent himself in authority, tranquillity, and pleasure upon the earth, he placed him in *Paradise*. What was *Paradise*? but a Garden, an Orchard of trees and herbs, full of pleasure? and An Orchard nothing there but delights. The gods of the earth resembling in Paradise the great God of heaven in authority, Majesty, and abundance of all things, wherein is their most delight? and whither do they withdraw themselves from the troublesome affaires of their estate, being tyred with the hearing and judging of litigious Cause of wearisome controversies, choaken (as it were) with the close ayre of their sumptuous buildings, their stomachs cloyed with variety of Banquets, their eares filled and over-burthened with tedious discourtings? whither? but into their Orchards? made and prepared, dressed and destinated for that purpose, to renew and refresh their senses, and to call home their over-wearied spirits. Orchard is the remedy. Nay, it is (no doubt) a comfort to them, to set open their easements into a most delicate Garden and Orchard, whereby they may not only see that, wherein they are so much delighted, but also to give fresh, sweet and pleasant aire to their Galleries and Chambers.

And look what these men do by reason of their greatnesse and ability, provoked with delight the same doubtlesse would every of us do if power were answerable to our desires: whereby we shew manifestly, that of all other delights on earth, they that are taken by Orchards are most excellent, and most agreeing with nature. All delight in Orchards.

For whereas every other pleasure commonly fills some one of our senses, and that only with delight; this makes all our senses swim in pleasure, and that with infinite variety, joyned with no lesse commodity. This delights all the senses.

That famous Philosopher, and matchlesse Oratour, *M. T. C.* Delighteth in prescribing nothing more fit, to take away the tediousnesse of three or fourscore years, than the pleasure of an Orchard. of old age.

What can your eye desire to see, your eares to heare, your mouth to taste, or your nose to smell, that is not to be had in an Orchard, with abundance of variety? What more delightfome than an infinite variety of sweet smelling flowers; decking with sundry colours, the green mantle of the earth, the universall mother

mother of us all, so by them bespotted, so dyed, that all the World cannot sample them, and wherein it is more fit to admire the Dyer, than imitate his workmanship, colouring not only the earth, but decking the aire, and sweetning every breath and spirit.

Flowers.

The Rose red, Damask, Velvet. and double double Province Rose, the sweet musk Rose double and single, the double and single white Rose : The fair and sweet senting Woodbine, double and single, and double double. Purple Cowslips, and double Cowslips, and double double Cowslips ; Primrose double and single. The Violet nothing behind the best, for smelling sweetly. A thousand more will provoke your content.

Borders and squares.

And all these by the skill of your Gardner, so comelily and orderly placed in your borders and squares, and so intermingled, that one looking thereon cannot but wonder, to see, what nature corrected by Art, can do.

Mounts.

When you behold in divers corners of your Orchard *Mounts* of stone or wood, curiously wrought within and without, or of earth covered with fruit trees, Kentish Cherries, Damsons, Plums, &c. with faires of precious Workmanship : and in some corner (or moe) a true Dial or Clock, and some Antickworks ; and especially silver sounding Musicke, mixt instruments. and voyces, gracing all the rest : How will you be wrapt with Delight ?

Walks.

Large Walks, broad and long, close and open like the *Tempe* groves in *Theffaly*, raised with gravell and sand, having seats and banks of Camomile ; all this delights the mind, and brings health to the body.

Seats.

Order of trees.

View now with delight the works of your own hands, your fruit trees of all sorts, loaden with sweet blossoms, and fruit of all tastes, operations and colours : your trees standing in comely order which way soever you look.

Your borders on every side hanging and drooping with Feberries, Raspberries, Barberries, Currans ; and the Rounts of your trees powdred with Strawberries, Red, White and Green, what a pleasure is this ? Your Gardner can frame your lesser wood to the shape of men armed in the field, ready to give battel : of swift running Greyhounds, or of well sented and true Running

Shape of men and beasts.

Hounds

Hounds to chase the Deer, or hunt the Hare. This kind of hunting shall not wake your corn; nor much, your coyn.

Mazes well framed a mans height, may perhaps make your friend wander in gathering of berries till he cannot recover him-
self without your help. Mazes.

To have occasion to exercise within your Orchard, it shall be a pleasure to have a bowling Alley, or rather (which is more manly, and more healthfull) a pair of Butts, to stretch your
Armes. Bowling-Alley.

Rosemary and sweet Eglantine are seemly Ornaments about a Door or Window, and so is Woodbine.

Look Chap 15 and you shall see the form of a Conduit. If there were two or more, it were not amiss.

And in mine own opinion I could highly commend your Orchard, if either through it, or hard by it, there should run a pleasant River with silver streams: you might sit in your Boat, and Angle a peckled Trout, sleighty Eele, or some other Fish. Or mount, whereon you may row with a Boat, and fish with Nets.

Store of Bees in a dry and warm Bee house, comely made of Beehive Fir boards to sing, and sit, and feed upon your flowers and sprouts, make a pleasant noyse and sight. For cleanly and innocent Bees, of all other things, love and become, and thrive in an Orchard. If they thrive (as they must needs, if your Gardener be skilfull, and love them; for they love their friends, and hate none but their enemies) they will bestow the pleasure, yield great profit to pay him his wages. Yea, the increase of twenty Stocks or Stools with other fees, will keep you an Orchard.

You need not doubt their stings, for they hurt not whom they know, and they know their Keeper and acquaintance. If you like not to come among them, you need not doubt them: for but near their store, and in their own defence, they will not fight, and in that case only (and who can blame them?) they are manly, and fight desperately. Some (as that honourable Lady at *Hatchers*, Whose name doth much grace mine Orchard) use to make seats for them in the stone walls of their Orchard, or Garden, which is good, but wood is better.

A Vine over-shadowing a seat, is very comely, though her Grapes Vine with us ripen slowly.

One

Birds.
Nightingale.

One chief grace that adorns an Orchard, I cannot let slip : a brood of Nightingalls, who with several notes and tunes, with a strong delightfome voyce out of a weak body, will beare you company night and day. She loves (and lives in) hots of woods in her heart. She will help you to cleanse your trees of Caterpillers, and all noysome wormes and flyes. The gentle Robin-red-brest will help her, and in winter in the coldest storms will keep a part. Neither will the silly Wren be behind in Summer, with her distinct whistle, (like a sweet Recorder) to chear your spirits.

Robin
Red-brest.
Wren.

Black-bird.
Thrush.

The Black-bird and Thrush (for I take it, the Thrush sings not, but devours) sing loudly in a May morning, and delights the eare much, and you need not want their company, if you have ripe Cherries or Berries, and would as gladly as the rest doe your pleasure : but I had rather want their company than my fruit.

What shall I say ? A thousand of pleasant delights are attending an Orchard : and tooover shall I be vveary, than I can reckon the least part of that pleasure which one that hath, and loves an Orchard, may find therein.

What is there of all these few that I have reckoned, which doth not pleasure the eye, the ear, the smell, and taste ? And by these senses, as Organs, Pipes, and windows, these delights are carried to refresh the gentle, generous, and noble mind.

Your own
labour.

To conclude, what joy may you have, that you living to such an age, shall see the blessing of God on your labours while you live, and leave behind you to heirs, or successors (for God will make heirs) such a work, that many ages after your death, shall record your love to their Country ? And the rather, when you consider (Chap. 14.) to what length of time your work is to last.

FINIS:

THE
COUNTRY HOUSE-WIVES
GARDEN,

Containing rules for Herbs, and Seeds,
of common use, with their times and seasons
when to set and sow them.

Together

With the Husbandry of Bees, published
with secrets very necessary for every House-
wife: As also divers new Knots for Gardens.

The Contents see at large, in the last Page,

Genes. 2. 29.

*I have given unto you every Herbe, and every Tree, that shall be to you
for meat.*



LONDON,

Printed by *William Wilson*, for *George
Sambridge*, at the Bible on Ludgate-hill,
near Fleet-bridge. 1660.



THE COUNTRY HOUSE-VVIVES GARDE N.

CHAP. I.

The Soyle.



The Soyl of an Orchard and Garden, differ
only in these three poynts : First, the Gar-
dens soyl would be somewhat dryer, because
herbs being more tender then trees, can nei-
ther abide moysture nor drought, in such
excessive measure, as trees ; and therefore
having a dryer soyl, the remedy is easie a-
gainst drought : if need be, water soundly ;

Dry.

which may be done with small labour, the compasse of a Garden
being nothing so great, as of an Orchard : and this is the cause
(if they know it) that Gardners raise their squares : but if moy-
sture trouble you, I see no remedy without a generall danger, ex-
cept in Hops, which delight much in a low and sappy earth.

Hops.

Secondly, the soyl of a Garden would be plaine and leuell, at
least every square, (for we purpose the square to be the fittest
form) the reason is, the earth of a garden wanting such helps, as
should stay the water, which an orchard hath, & the roots of herbs
being

being mellow and loose, is soon either washt away, or sends out his heart by too much drenching and walking.

Thirdly, if a garden soil be not clear of weeds, and namely of grass, the herbs shall never thrive: for how should good herbs prosper, when evill weeds wax so fast: considering good herbs are tender in respect of evill weeds: these being strengthened by nature, and the other by art? Gardens have small place in comparison, and therefore may more easily be followed, at the least one half year before, and the better dressed after it is framed. And you shall find that clean keeping doth not onely avoid danger of gathering weeds, but also is a speciall ornament, and leaves more plentifully sap for your tender herbs.

CHAP. II.

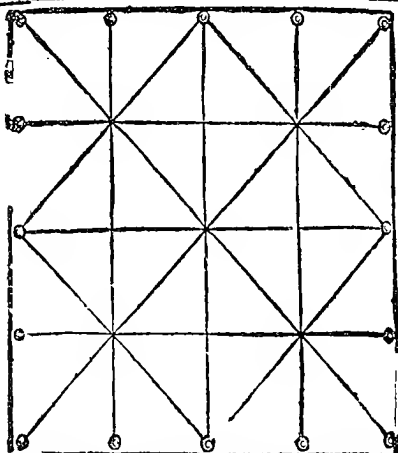
Of the Sites.

I Cannot see in any sort, how the site of the one should not be good, and fit for the other: The ends of both being one, good, wholesome, and much fruit joyned with delight, unlesse trees be more able to abide the nipping frosts than tender herbs: but I am sure, the flowers of trees are as soon perished with cold: as any herbe except Pumpion, and Melons.

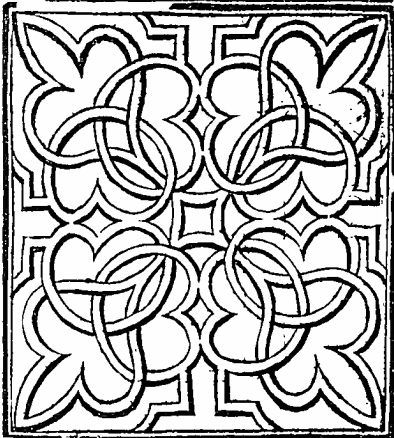
CHAP. III.

Of the Forme.

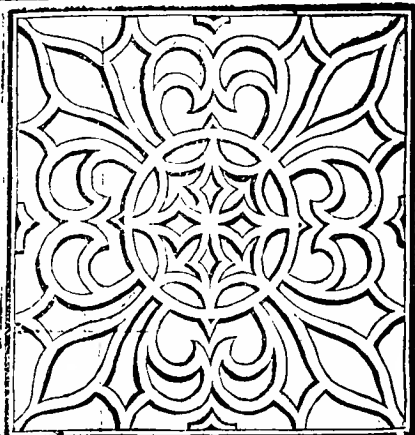
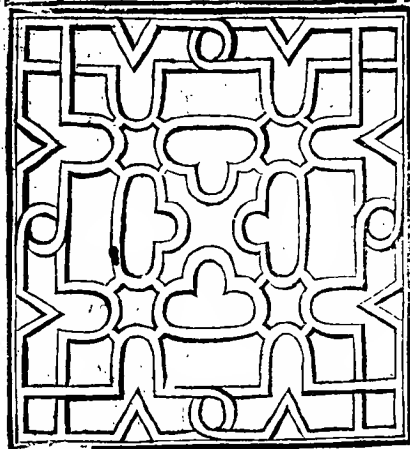
L Et that which is said in the Orchards forme, suffice for a Garden in generall: but for speciall formes in squares, they are as many, as there are devices in Gardners brains. Neither is the wile and art of a skilfull Gardener in this point not to be commended, that can work more variety for breeding of more delightfome choise, and of all those things, where the owner is able and desirous to be satisfied. The number of forms, Mazes, and Knots is so great, and men are so diversly delighted, that I leave every House-wife to her self, especially seeing to set down many, had been but to fill much paper; yet lest I deprive her of all delight and direction, let her view these few, choise new formes; and note this generally, that all plots are square. and all are bordered about with Privet, Raisins, Fea-berries, Roses, Thorne, Rosemary, Bee-flowers, Hop, Sage, or such like.

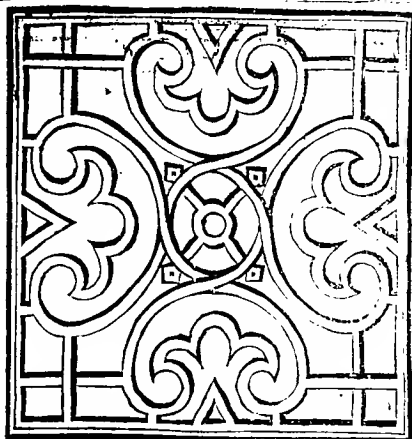


The ground
plot for knots.

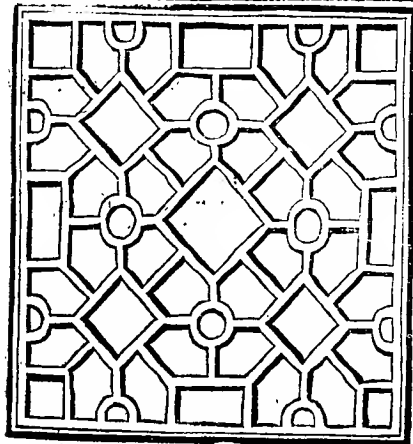


Cinkfolle.

Flower
deluce.The Tre-
foyle.

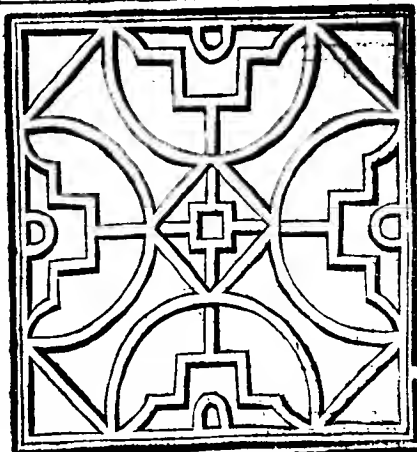


The Fret.

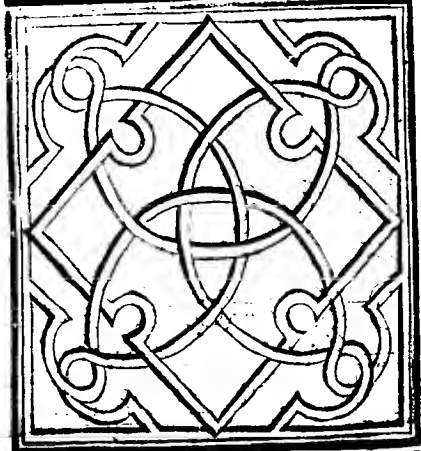


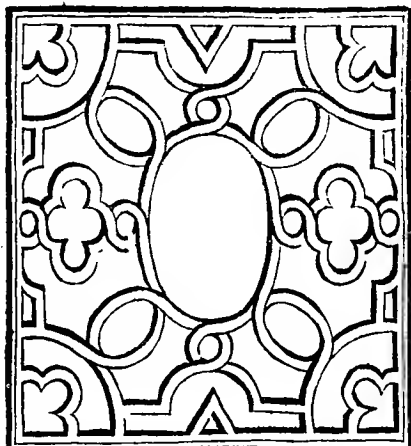
Lozenges.

Crosse-bow.

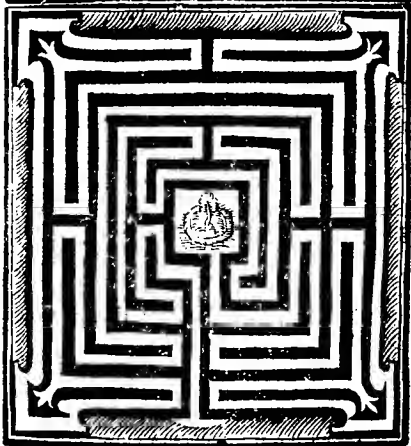


Diamond.





Ovall.



Maze.

CHAH. IV.

Of the Quantity.

A Garden requireth not so large a scope of ground as an Orchard, both in regard of the much weeding, dressing, and removing, and also the pains in a Garden is not so well repayed home, as in an Orchard: It is to be granted, that the Kitchen garden doth yield rich gains, by Berries, Roots, Cabbages, &c. yet these are no way comparable to the fruit of a Rich Orchard: But notwithstanding I am of opinion, that it were better for *England* that we had more Orchards and Gardens, and more large. And therefore, we leave the quantity to every mans ability and will.

CHAP. V.

Of Fence.

Seeing we allow Gardens in Orchard plots, and the benefit of a Garden is much, they both require a strong and snowding fence. Therefore leaving this, let us come to the Herbs themselves, which must be the fruit of all these labours.

CHAP. VI.

Of two Gardens.

Herbes are of two sorts, and therefore it is meet, (they requiring diverse manners of Husbandry.) that we have two Gardens: A garden for flowers, and a Kitchen garden: or a Summer garden: not that we mean so perfect a distinction, that we meane the Garden for flowers should or can be without herbs good for the Kitchen, or the Kitchen garden should want flowers, nor on the contrary: but for the most part they would be severed: first, because your Garden flowers shall suffer some disgrace, if among them you intermingle Onions Parsnips, &c. Secondly, your Garden that is durable, must be of one form: but that which is your Kitchens use, must yield daily Roots, or other herbs, and suffer deformity. Thirdly, the herbs of both will not be both alike ready, at one time, either for gathering, or removing. First therefore

Of the Summer Garden.

THefe herbs and flowers are comely and durable for ſquares & Knots, and all to be ſet at *Michael-tide*, or ſomewhat before; that they may be ſetled in, and taken with the ground before winter; though they may be Set, eſpecially ſown, in the ſpring.

Roses of all ſorts, (ſpoken of in the Orchard) muſt be Set: Some uſe to Set ſlips and twine them, which ſometimes, but ſeldom, thrive all.

Rosemary, Lavender, Bee-flower; Iſop, Sage, Time, Cowſlips, Pyony, Daffies, Clove Gilliflowers, Pinks, Sothernwood, Lillies, of all which hereafter.

Of the Kitchen Garden.

THough your Garden for flowers doth in a ſort peculiarly challenge to it ſelf a perfit, and exquisite form to the eyes, yet you may not altogether neglect this, where your herbs for the pot do grow. And therefore ſome here make coniey borders with the herbs aforeſaid. The rather, becauſe abundance of Roses and Lavender, yield much profit, and comfort to the ſences: Roſe water, Lavender, the one cordiall (as alſo the Violets, Burrag:, and Bugloſs) the other reviving the ſpirits by the ſence of ſmelling: both moſt durable for ſmell, both in flowers and water: you need not here raiſe your beds, as in the other Garden, becauſe Summer towards, will not let too much wet annoy you, and theſe herbs require more moyſture: yet muſt you have your beds divided, that you may go betwixt to weed, and ſomewhat of form would be expected: To which it availeth that you place your herbs of biggeſt growth, by walles, or in borders, as Fennell, &c. and the loweſt in the middeſt, as Saffron, Strawberries, Onions, &c.

CHAP. VII.
Division of Herbs.

Garden herbs are innumerable, yet theſe are common, and ſufficient for our Country-houſwives.

Herbs of greateſt growth.

K

Fen-

Fennell, Angelica, Tanfie, Hollihock, Lovage, Elicampane, French Mallowes, Lillies, French Poppy, Endive, Succory, and Clary.

Herbs of middle growth.

Burrage, Buglosse, Parsly, Sweet Sicily, Flower-deluce, Stock Gilli-flowers, Wall-flowers, Anniseeds, Coriander, Fether-few, Mary-golds, Oculus Christi, Langdibee, Alexanders, Carduus-benedictus.

Herbs of smallest growth.

Pansie, or Harts-case, Coast-Marjoram, Savory, Straw-berries, Saffron, Lycoras, Daffadownillies, Leeks, Chives, Chibbals, Skerots, Onions, Batchelors buttons, Daisies, Peniroyall.

Hitherto, I have only reckoned up, and put in this rank, some Herbs: their Husbandry followes, each in an Alphabetical order, the better to be found.

CHAP. VIII.

Husbandry of Herbs.

A Alexanders, are to be renewed as Angelica. It is a timely Pot-herb.

Angelica is renewed with the seed, whereof he beareth plenty the second year, and so dyeth. You may remove the roots the first year. The leaves distilled, yield water, soveraign to expell pain from the stomach. The Root dryed, taken in the fall, stoppeth the pores against infections.

Anniseeds: make their growth, and bear seeds the first year, and dieth as Coriander: it is good for opening the pipes, and it is used in Comfits.

Artichoakes: are renewed by dividing the Roots into Sats, in March, every third or fourth year. They require a severall usage, and therefore a severall whole plot by themselves, especially, considering they are plentiful of fruit much desired.

Burrage and Buglosse: two Cordials renew themselves by seed yearly, which is hard to be gathered, they are exceeding good Pot-herbs, good for Bees, and most comfortable for the heart and stomach, as Quinces and Wardens.

Camomile: set roots in banks and walks, it is sweet smelling, qualifying head-ach.

Cab-

Cabbages : require great room, they ſeed the ſecond year, ſow them in *February* , remove them when the plants are an handfull long, ſet deep and wet. Look well in drought for the white Caterpillars worm, the ſpawnes under the leaf cloſely : for every living Creature doth ſeek food and quiet ſhelter, and growing quick they draw to, and eat the heart : you may find them in a rainy dewy morning.

It is a good Pot-herbe, and of this herbe called *Cole* , our Country Houſewives give their pottage their name, and call them *Caell*.

Cardus Benedictus, or bleſſed thistle : ſeeds and dyes the firſt year, the excellent vertue thereof, I refer to Herballs, for we are Gardiners, not Phyſicians.

Carrets are ſown late in *Aprill* or *May*, as Turneps, elſe they ſeed the firſt year, and then their roots are naught : the ſecond year they dye, their roots grow great, and require large room.

Chibals or **Chives**, have their roots parted, as Garlick, Lillies, &c. and ſo are they ſet every third or fourth year : a good pot-herbe, opening, but evil for the eyes.

Clary : is ſown, it ſeeds the ſecond year, and dyes. It is ſomewhat harſh in taſt, a little in pottage is good, it ſtrengtheneth the reins.

Coaſt, Root parted, makes Sets in *March* : it bears the ſecond year : it is uſed in Ale in *May*.

Coriander : is for uſage and uſes, much like Annifeeds.

Daſſidowndillies : have their roots parted and ſet once in three or four year or longer time. They flower timely, and after *Autumn* are ſcarce ſeen. They are more for Ornament, then for uſe, ſo are Daillies.

Dailie roots parted and Set, as Flower-deluce and Camomile, when you ſee them grow too thick or decay. They be good to keep up, and ſtrengthen the edges of your borders, as Pinks, they be red, white, mixt.

Ellicampane Root is long laſting, as is the Lovage : it ſeeds yearly, you may divide the Root, and ſet ; the Root taken in winter it is good, (being dried, powdered, and drunk) to kill itches.

Endive and **Succory** : are much like in nature, ſhape, and uſe,

they renew themselves by seed, as Fennell, and other herbs. You may remove them before they put forth shanks : a good Pot-herbe.

Fennell is renewed, either by the seeds (which it beareth the second year, and so yearly in great abundance) sown in the fall or Spring; or by dividing one Root into many Sets, as Artichoke. It is long of growth and life. You may remove the root unshankt: It is exceeding good for the eyes, distilled, or any otherwise taken: it is used in dressing Hives for swarms; a very good Pot-herbe, or for Sallets.

Fether-few shakes seed. Good against a shaking Fever, taken in a posset drink fasting.

Flower-deluce, long lasting. Divide his roots, and Set : the roots dried have a sweet smell.

Garlick may be Set an handfull distance, two inches deep, in the edge of your beds. Part the head into severall cloves, and every clove, set in the latter end of *February*, will increase to a great head before *September* : good for opening, evill for eyes : when the blade is long, fast two and two together, the heads will be bigger.

Hollihock riseth high, seedeth and dyeth, the chief use I know is ornament.

Ilop is reasonable long lasting : young Roots are good S.t, slips better. A good pot-herbe.

July-flowers, commonly called Gilly-flowers, or Clove July-flowers, (I call them so, because they flower in *July*) they have the name of Cloves, of their sent. I may well call them the King of flowers except the Rose, & the best sort of them are called Queen-July flowers. I have of them nine or ten several colours, and divers of them as big as Roses; of all flowers (save the Damask Rose) they are the most pleasant to sight and smell : they last not past three or four years unremoved. Take the slips (without shanks) and Set any time save in extreame frost : but especially at *Michael-tide*. Their use is much in ornament, and comforting the spirits, by the sense of smelling.

July-flowers of the wall, or wall July-flowers, Wall-flowers, or Bee-flowers, or Winter-July-flowers, because growing in the walls even in winter, and good for Bees, will grow even in stone-walls,

walls, they will seem dead in Summer, and yet revive in Winter, they yield seed plentifully, which you may sow at any time, or in any broken earth, especially on the top of a mud-wall, but moist, you may set the root before it be brancht, every slip that is not flower'd will take root, or crop him in Summer, and he will flower in Winter, but his winter seed is untimely. This and Palmes are exceeding good, and timely for Bees.

Lely yield seed the second year, unremoved; and dye, unlessse you remove them, usually to eat with Salt and Bread, as Onyons alwayes green, good pot-herb, evill for the eyes.

Lavender-spike would be removed within seven yeares, or eight at the most: slips twined, as Hysope and Sage, would take best at *Michael-side*. This flowre is good for Bees, most comfortable for smelling, except Roses: and kept dry, is as strong after a year, as when it is gathered. The water of this is comfortable.

White *Lavender* would be removed sooner.

Leince yields seed the first year, and dyes: sow betime; and if you would have them Cabbage for sallets, remove them as you do Cabbage. They are usuall in Sallets and in the pot.

Lillies white and red, remove once in three or four yeares, their roots yield many Sets, like the Garlick. *Michael-side* is the best. They grow high, after they get root. These roots are good to break a byle, as are Mallows and Sorrel.

Mallows, French or gagged, the first or second year, seed plentifully. Sow in *March*, or before. They are good for the housewives pot, or to break a bunch.

Marigolds, most commonly come of seed, you may remove the Plants, when they be two inches long. The double Marigold, being as bigge as a little Rose, is good for shew. They are a good Pot-herbe.

Oculus Christi, or Christs-eye, seeds, and dyes the first or second year: you may remove the young Plants, but seed is better. One of these seeds put into the eye, within three or four houres will gather a thick skinne, clear the eye, and bolt it selfe forth without hurt to the eye. A good Pot-herbe.

Onyons are sown in *February*, they are gathered at *Michael-side*, and all the Summer long, for Sallet; as also young parslly, Sage,

Sage, Chibals, Lettice, sweet Sicily, Fennell, &c. good alone, or with meat, as muttens, &c. for sawce, especially for the pot.

Parfly sow the first year, and use the next year: it seeds plentifully, an herb of much use, as sweet Sicily is. The seed and roots are good against the stone.

Parfneps require an whole plot, they be plentifull and common, sow them in *February*, the Kings (that is in the middle) seed broadest and reddest. Parfneps are sustenance for a strong stomach, not good for evil eyes: When they cover the earth, in a dreaught to tread the tops, makes the Roots bigger.

Penny-royal, or pudding grasse, creeps along the ground, like ground Ivy. It lasts long, like daisies, because it puts and spreads daily new roots. Divide, and remove the roots, it hath a pleasant tast and fine, good for the pot, or hacktmeat, or Haggas pudding.

Pumpions: Set Seeds with your finger, a finger deep, late in *March*, and so soon as they appear, every night if you doubt frost, cover them, and water them continually out of a water pot: they be very tender, their fruit is great and waterish.

French Poppy beareth a great flower, and the seed will make you sleep.

Raddish is sauce for cloyed stomachs, as Capers, Olives, and Cucumbers: cast the seeds all summer long here and there, and you shall have them alwayes young and fresh.

Rosemary, the grace of herbs here in England, in other Countries common. To set slips immediately after *Lammus*, is the surest way. Seed sown may prove well, so they be sown in hot weather, somewhat moyst, and good earth: for the herb, though great, is neshan tender (as I tak: it) brought from hot Countries to us in the cold North: set thin, it becomes a window well. The use is much in meats, more in Physick, most for Bees.

Rue, or herb *figrae*, continually green, the slips are set. It lasts long, as Rosemary, Sothernwood, &c. too strong for mine Housewives pot, unless she will brew Ale therewith, against the plague: let them not feed if you will have him last.

Saffron, every third year his roots would be removed at *Mid-september*, for when all other herbs grow most, it dyeth. It bloweth at *Michael-tide*, and groweth all winter: keep his flowers from birds in the morning, and gather the yellow, (for they

they shape much like Lillies) dry, and after dry them : they be pretious, expelling diseases from the heart and stomach.

Savory : seeds and dyes the first year, good for my Housewives pot and pye.

Sage : set slips in *May*, and they grow aye ; let it not seed, it will last the longer. The use is much and common. The Monkish proverb is *tritum*.

Cur moritur komo, cui salvia crescit in horto ?

Skerots : the Roots are set when they be parted, as *Pionie*, and Flower-deluce at *Michael-tide*, the Root is but small and very sweet, I know none other speciall use but the Table.

Sweet *Sicely* : long lasting, pleasantly tasting, either the seed sown, or the root parted, and removed, makes increase, it is of like use with parsley.

Strawberries : long lasting, set Roots at *Michae'-tide*, or the Spring, they be red, white, and green, and ripe, when they be great and soft, some by *Midsummer* with us. The use is, they will cool my Housewife well, if they be put in Wine or Creame with Sugar.

Time : both seeds, slips, and Roots are good, if it seed not, it will last three or four years or more, it smelleth comfortably. It hath much use, namely in all cold meats, it is good for Bees.

Turnep : is sown. In the second year they bear plenty of seed ; they require the same time of sowing that Carrets do ; they are sick of the same disease that Cabbages be. The root increaseth much, it is most wholesome, if it be sown in a good and well tempered earth ; Sovereigne for eyes and bees.

I reckon these herbs onely, because I teach my Country Housewife, not skilfull Artists ; and it should be an endlesse labour, and would make the matter tedious to reckon up *Land-theefe*, *Stock-Gilly-flowers*, *Charvell*, *Valerian*, *Go to bed at noon*, *Penn*, *Lyc*, *at*, *Tarvie*, *Garden mints*, *Germander*, *Centaury*, and a thousand such Physick herbs. Let her first grow cunning in this, and then she may enlarge her Garden as her skill and ability increaseth. And to help her the more, I have set down these Observations.

CHAP. IX.

Generall rules in Gardening.

IN the South parts, Gardening may be more timely, and more safely done, then with us in *Yorkshire*, because our ayr is not so favourable, nor our ground so good.

2. Secondly, most seeds shakt, by turning the good earth, are renewed, (1) In Mother the earth keeping them in her bowels, till the Sun their Father can reach them with his heat.

3. In setting herbs, leave no top more then an handfull above the ground, nor more then a foot under the earth.

4. Twine the roots of those slips you set, if they will abide it. Gilly flowers are too tender.

5. Set moist and sowe dry.

6. Set slips without shanks at any time, except at *Midsummer*, and in frosts.

7. Seeding spoiles the most roots, as drawing the heart and sap from the root.

8. Gather for the pot and medicines, herbs tender and green, the sap being in the top, but in Winter the root is best.

9. All the herbs in the Garden for flowers would once in seven years be renewed, or soundly watered with puddle water, except *Rosemary*.

10. In all your Gardens and Orchards, banks and Seas of *Camomile*, *Penny-royall*, *Daisies* and *Violets*, are seemly and comfortable.

11. These require whole plots, *Artichokes*, *Cabbages*, *Turneps*, *Parfneps*, *Onyons*, *Carrets*, and (if you will) *Saffron* and *Skerrets*.

12. Gather all your seeds, dead, ripe, and dry.

13. Lay not dung to the roots of your herbs-as usually they do: for dung not melted is too hot even for Trees.

14. Thin setting and sowing (so the roots stand not past a foot distance) is profitable, for the herbs will like the better. Greater herbs would have more distance.

15. Set and sow herbs in their time of growth, except at *Midsummer*

summer, for then they are too too tender but trees in their time of rest.

16 A good Housewife may, and will gather store of herbs for the pot, about Lammas, and dry them, and pound them, and in winter they will do good service.

Thus have I limmed out a Garden to our Countrey Housewives, and given them Rules for common herbs. If any of them (as sometimes they are) be knotty, I refer them to Chap. 3. The skill and pains of weeding the Garden with weeding knives of fingers, I refer to themselves and their maids, willing them to take the opportunity after a shewre of rain, withall, I advise the Mistresse either to be present her selfe, or to teach her maids to know herbs from weeds.

CHAP. X.

The Husbandry of Bees.

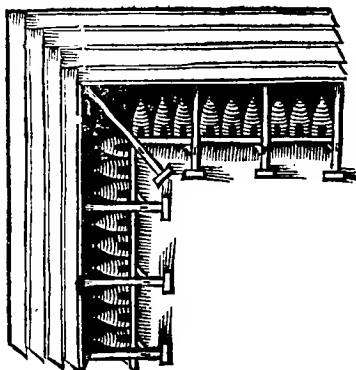
Here remaineth one necessary thing to be prescribed, which in mine opinion makes as much for ornament, as either flowres, or form, or cleanness, and I am sure as commodious as any of, or all the rest : which is ~~Bees~~ well ordered. And I will not account her any of my good House-wives, that wanteth either Bees, or skilfulnesse about them. And though I know some have written well and truly, and others more plentifully upon this theme : yet somewhat have I learned by experience (being a Bee-master my self) which hitherto I cannot find put into writing, for which I think our House Wives will count themselves beholding unto me.

The first thing that a Gardener about Bees must be carefull for, is an house, not stakes and stones abroad, *Sub dio* : for stakes rot and reel, Raine and weather eat your hives and covers, and cold most of all is hurtfull for your Bees. Therefore you must have an house made along a sure dry wall in your Garden, neer, or in your Orchard : For Bees love flowers and wood with their hearts.

Bee-houses.

This the form ; a Frame standing on posts with one floor (if you would have it hold more Hives, two floores) boarded, laid on bearers, and back posts covered over with boards, flat-wise.

Let the floors be without holes or clefts, lest in casting time



the Bees lye out and loyter.

And though your Hives stand within an handbreadth the one of another, yet will Bees know their home.

In this frame may your Bees stand dry and warm, especially if you make doores like doores of windows to shroud them in winter, as in an house: provided you leave the hives mouth open. I my self have devised such an house, and I find that it strengthens my Bees much, and my hives will last six to one.

Hives. Mr. Markham commends hives of wood ; I discommend them not: but straw hives are in use with us, and I think, with all the world, which I commend for nimbleness, closeness, warmeness, and dryness. Bees love no external motions of daubing, or such like. Sometimes occasion shall be offered to lift and turne hives, as shall appear hereafter. One light entire
hive

hive of straw, in that case, is better then one that is daubed, weighty and cumbersome. I wish every hive, for a keeping swarme, to hold three pecks at least by measure. for too little hives procure bees, in casting time, either to lye out, and loyter, or else to cast before they be ripe and strong, and so make weake swarms and untimely : whereas if they have roome sufficient, they ripen timely, and casting seasonably, are strong, and fit for labour presently. Neither would the hive be too great, for then they loyter, and waste meat and time.

Your Bees delight in wood, for feeding, especially for casting ^{Hiving of Bees,} therefore want not an Orchard. A *May's* swarm is worth a Mares Foal : if they want wood, they be in danger of flying away. Any time before *Midsummer* is good for casting, and timely; before *July* is not evill. I much like Mr. *Markham's* opinion for having a swarm in combs of a dead or forsaken hive, so they be fresh and cleanly. To think that a swarme of your own, or others, will of it self come into any such hive, is a meer conceit, *Experto credo Roberto*. His smearing with hony, is to no purpose, for the other Bees will eat it up. If your Swarm knit in the top of a tree, as they will, if the wind beat them not to fall down, let the stool or ladder prescribed in the Orchard do you service.

The less your Spelks are, the less is the wast of your hony, ^{Spelks,} and the more easily will they draw, when you take your Bees. Four Spelks ashwart, and one top Spelk are sufficient. The Bees will fasten their combs to the hive. A little Hony is good, but if you want, Fennel will serve to rub your hive withall. The Hive being dress'd and ready spelkt, rub'd and the hole made for their passage (I use no hole in the Hive but a piece of wood hoald, to save the Hive and keep out mice) shake in your Bees or the most of them (for all commonly you cannot get) the remainder will follow. Many use smoke, rattles, &c. which I utterly dislike : for Bees love not to be molested. Ringing in the time of casting is a meer fancy, violent handling of them is simply evill, because bees of all other creatures love cleanliness and peace. Therefore handle them leisurely and quietly, and their Keeper whom they know may do with them what he will without hurt : Being hived at night, bring them to their seat. Set your hives all of one year together.

Signs of breeding, if they be strong.

- 1 They will avoid dead young Bees and Droane.
- 2 They will sweat in the morning, till it run from them, alwayes when they be strong.

Signes of casting.

- 1 They will flye Droans by reason of heat.
- 2 The young Swarme will once or twice in some faire season come forth multring, as though they would cast, to prove themselves and go in again.
- 3 The night before they cast, if you lay your eare to the hives mouth, you shall hear two or three, but especially one above the rest, cry, Up, up, up, or Tout, tout, tout, like a Trumpet sounding the alarum to the battel.

Much descanting there is of, and about the master Bee, and their degrees, order, and Government: but the truth in this poynt is rather imagined, then demonstrated. There are some conjectures of it, viz. wee see in the combs diverse greater houses then the rest, and we commonly hear the night before they cast, sometime one Bee, sometime two or more Bees, give a loud and several sound from the rest, and sometimes Bees of greater bodies than the common sort: but what of all this? I lean not on conjectures, but love to set down what I know to be true, and leave these things to them that love to divine.

Keep none weak, for it is hazard oftentimes with losse. Feeding will not help them: for being weak, they cannot come down to meat, or if they come down, they dye, because Bees weak cannot abide cold. If none of these, yet will the other Bees being strong, smell the honey, and come and spoyle and kill them. Some help is in casting time, to put two weak swarms together, or as Tr. Markham well saith. Let them not chafe late, by raising them with wood or stone, but with impe (say I.) An impe is three or four wreaths wrought as the Hive, the same compass, to raise the Hive withall: but by experience in tryal, I have found out a better way by Clustering, for late or weak swarms; hitherto not found out of any that I know. That is this: After casting time, if I have any stock proud and hindred from timely casting, with former Winters poverty, or evill weather in casting time, with two handles and crooks fitted for the purpose, I turn up that stock so pistered

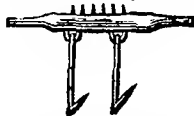
Catching.

Clustering.

lined with Bees, and set it on the crown, upon which so turned with the mouth upward I place another empty hive well drest, and spelt, into which without any labour, the swarm that would not depart, and cast, will presently ascend, because the old Bees have this quality (as all other breeding creatures have) to expel the young, when they have brought them up.

There will the Swarm build as kindly, as if they had of themselves been cast. But before you lay betwixt the Hives some straight and cleanly stick or sticks, or rather a board with holes, to keep them asunder: otherwise they will joyn their works together so fast that they cannot be parted. If you so keep them asunder at *Michael-tide*, if you like the weight of your swarms (for the goodnesse of swarms is tryed by the weight) so caught, you may set it by for a stock to keep. Take heed in any case the combs be not broken, for then the other Bees will smell the honey, and spoil them. This have I tryed to be very profitable for the saving of Bees.

The Instrument hath this form. The great streight piece of wood



the rest are in clasp & nails, the clasps are loose in the staple, two men with two of these fastned to the Hive, will easily turn it up.

They gather not till *July*; for then they be discharged of their young, or else they are become now strong to labour and now sap in flowers: strong and proud by reason of time, and force of Sun. And now also in the North (and not before) the herbs of greatest vigour put forth their flowers, as *Blanc*, *Fennel*, *Borage*, &c.

The most profitable weather for them, is heat and draught, because the north Bees can neither abide cold or wet; and thowres (which they well love) do interrupt their labours, unless they fall in the night, and so they further them.

After cutting *Thyme*, you shall benefit your stocks much, if you help them to kill their *Droans*, which by all probability and judgment, are an idle kind of Bees, and wastfull. Some say they breed, and have seen young *Droans* in taking their honey, which I know is true. But I am of opinion that there are also Bees

which have lost their stings, and so being as it were gelded, become idle and great : the use is great use of them. *Deus & natura nihil facit frustra.* " They hate the bees, and cause them cast the
 " sooner: they never come forth, but when they be over-heated ;
 " they never come home laden. After casting time, and when the
 bees want meat, " You shall see the labouring Bees fasten on them,
 " two, three or four at once, as if they were thieves to be led to
 " the Gallows, and killing them, they cast them out, and draw
 " them far from home, as hatefull enemies. Our House-wife, if she
 be the Keeper of her own bees (as she had need to be) may with
 her bare hand in the heat of the day safely destroy them in the
 hives mouth. Some use towards night, in a hot day, to set before
 the mouth of the hive a thin board with little holes in it, at
 which the lesser Bees may enter, but not the Droans ; so that you
 may kill them at your pleasure.

Annoyances.

Snails spoyl them by night like thieves : they come so quietly,
 and are so fast, that the Bees fear them not : look early and late,
 especially in a rainy or dewy evening or morning.

Mice are no lesse hurtfull, and the rather to Hives of straw :
 and therefore coverings of straw draw them : they will in either
 at the mouth, or shear themselves an hole : The remedy is good
 Cats, Rats-bane, and Watching.

The cleanly Bee hateth the smoak as poyson; therefore let your
 bees stand neerer your Garden, then your Brew-house or Kitchen.

They say Sparrowes and Swallows are enemies to Bees, but I
 see it not.

More Hives perish by Winters cold, then by all other hurts :
 for the Bee is tender and nice, and only lives in warm weather,
 and dyes in cold: And therefore let my House-wife be perswaded,
 that a warm dry house before described, is the chiefest helpe she
 can make her bees against this, and many more mischiefs. Many
 against cold in Winter, to stop up their hive close, and some set
 them in houses, perswading themselves, that thereby they relieve
 their bees. First tossing, moving, is hurtfull. Secondly, in houses,
 going, knocking, & shaking is noysome Thirdly, too much heat in
 an house is unnatural for them : But lastly, and especially, Bees
 cannot abide to be stopt close up. For at every warme season of
 the Sunne they revive, and living eat, and eating must needs
 purge

purge abroad : in her house the cleanly Bce will not purge her self. Judge you what it is for any living creature, not to disburden nature. Being shut up in calme seasons, lay your ear to the Hive and you shall hear them yearn and yell, as so many hundred prisoners. Therefore impound not your Bees, so profitable and free a creature.

Let none stand above three years, else the combs will be black and knotty, your honey will be thin and uncleanly ; and if any cast after three yeeres it is such as have swarms of old bees kept all together, which is great losse. Smoaking with Raggs, Rotten, or Brimstone, many use : some use drowning in a tub of cleane water, and the water well brew'd, will be good botchet. Draw out your spelks immediately with a paire of pinchers, lest the Wood grow soft and swell, and so will not be drawn, then must you cut your hive.

Let no fire come neer your honey, for fire softneth the waxe and drosse, and makes them run with the honey. Fire softneth, Straining
Honey. weakneth, and hindreth hony from purging. Break your combs small, when the dead empty combs are parted from the loaden combs, into a sieve, born over a great bowl, or vessel with two stives, and so let it run two or three dayes. The sooner you run it up, the better will it purge. Run your Swarm honey by it selfe, and that shall be your best. The elder your Hives are, the worse is your honey.

Usuall Vessells are of Clay, but after wood be satiated with Vessels. Honey (for it will leak at first : for honey is marvelously searching though thick, and therefore vertuous) I use it rather, because it will not break so soon with falls, frosts, or otherwise, and greater vessels of clay will hardly last.

When you use your Honey, with a spoon take off the skin which it hath put up.

And it is worth the regard, that bees thus used, if you have but forty stocks, shall yield you more commodity cleerly than forty Acres of Ground.

And thus much may suffice, to make good Housewives love and have good Gardens and Bees.

Des laus.

FINIS.

The



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Garden.

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A
MOST PROFITABLE
New Treatise, from approved experience
of the Art of Propagating Plants.

BY
SIMON HARWARD.

CHAP. I:

The Art of Propagating Plants.



Here are four sorts of Planting or Propagating, as in laying of shoots or little branches, whiles they are yet tender, in some pit made at their foot, as shall be said hereafter or upon a little ladder or basket of earth, tied to the bottom of the branch, or in boaring a Willow through, and putting the branch of the tree into the hole, as shall be fully declared in the

Chapter of Grafting.

There are likewise seasons to Propagate in ; but the best is in
M the

I.

2.

the spring, and *March*, when the trees are in the flower, and doe begin to grow lusty. The young planted Siens or little grafts must be propagated in the beginning of Winter, a foot deep in the earth, and good manure mingled amongst the earth, which you shall cast forth of the pit wherein you mean to propagate it, to tumble it in upon it again. In like manner, your superfluous Siens, or little plants must be cut close by the earth, when as they grow about some small Impe, which we mean to propagate, for they will do nothing but rot : For to propagate, you must dig the earth round about the tree, that so your roots may be laid in a minner halfe bare. Afterwards draw into length the pit on that side where you meane to propagate, and according as you perceive that the roots will be best able to yeeld, and be governed in the same pit, to use them, and that with all gentleness, and stop close your Siens, in such sort, as that the wreath which is in the place where it is grafted, may be a little lower than the Siens of the new wood growing out of the earth, even so high as it possible may be. If the trees that you would propagate be somewhat thick, and thereby the harder to ply, and somewhat stiff to lay in the pit ; then you may wet the stock almost to the midst, betwixt the root and the wreathing place, so with gentle handling of it, bow down into the pit the wood which the grafts have put forth, and that in as round a compass as you can, keeping you from breaking of it : afterward lay over the cut with gummed wax, or with gravell and sand.

CHAP. II

Grafting in the Barke.

GRafting in the Barke, is used from mid *August*, to the beginning of Winter, and also when the Western wind beginneth to blow, being from the 7 of *February*, unto the 11 of *June*. But there must care be had, not to graffe in the bark in any rainy season, because it would wash away the matter of joyning the one and the other together, and so hinder it.

Grafting in the bud is used in the Summer time, from the end of *May* untill *August*, as being the time, when the trees are strong and lusty, and full of sap and leaves. To wit, in a hot Country,

country from the midst of *June*, unto the midst of *July*, but in cold countries to the midst of *August*, after some small showres of Raine.

If the Summer be so exceedingly dry, as that some trees do withhold their sap, you must waite the time till it doe return.

Graft from the full of the Moon, untill the end of the old.

You may graft in a clift, without having regard to Rain, for the sap will keep it off.

You may graft from mid *August*, to the beginning of *November*: Cowes dung with straw doth mightily preserve the graft.

It is better to graft in the evening than the morning.

The turniture and tools of a Grafter, are a basket to lay his grafts in, Clay, Gravell, Sand, or strong Earth to draw over the plants cloven, Moss, Woollen cloaths, barks of Wi low to joyn to the late things and earth before spoken: and to keepe them fast: Oziers to tye againe upon the barke, to keepe them firme and fast, gummed Wax to dress and cover the ends and tops of the grafts newly cut, that so the rain and cold may not hurt them, neither yet the sap rising from below, be constrained to return again unto the shoots. A little Saw or hand-Saw, to saw off the stock of the plants, a little Knife or Penknife to graffe, and to cut and sharpen the grafts, that so the bark may not peel nor be broken; which often cometh to pass when the graft is full of sap. You shall cut the graffe so long, as that it may fill the cliffe of the plant, and therewithall it must be left thicker on the barke-side, that so it may fill up both the cliffe and other incisions, as any need is to be made, which must be alwayes well ground, well burnished without all rust. Two wedges, the one broad for thick trees, the other narrow for lesse and tender trees, both of them of box or some other hard and smooth wood, or steel, or of very hard iron, that so they may need lesse labour in making them sharpe.

A little hand bill to set the plants at more liberty, by cutting off superfluous boughs, helved of Ivory, box, or brasill.

CHAP. III.

Grafting in the Cleft.

THe manner of Grafting in a Cleft, to wit the stock being cloven, is proper not only to trees, which are as great as a mans legs or arms, but also to greater. It is true, that being trees cannot easily be cloven, in their stock : that therefore it is expedient to make incision in some one of their branches, and not in the main body, as we see to be practised in great Apple-trees, and great Pear-trees, and as we have already declared heretofore.

To graft in the cleft, you must make choyce of a graft that is full of sap and juyce, but it must not be, but till from after *January* untill *March* : And you must not thus graft in any tree that is already budded, because a great part of the juyce and sap would be already mounted up on high, and risen to the top, and there dispersed and scattered hither and thither, into every sprig and twig, and use nothing welcome to the graft.

You must likewise be resolved not to gather your graft the day you graft in, but ten or twelve dayes before : for otherwise if you graft it new gathered it will not be able easily to incorporate it self with the body and stock, where it shall be grafted ; because that some part of it will dry, and by this means will be a hindrance in the stock to the rising up of the sap, which it should communicate unto the graft, for the making of it to go forth, and whereas the dried part will fall a crumbling, and breaking through his rottenesse, it will cause to remain a concavity, or hollow place in the stock, which will be an occasion of a like inconvenience to befall the graft. Moreover, the graft being new and tender, might easily be hurt of the bands, which are of necessity to be tyed about the Stock, to keep the graft firm and fast. And you must further see, that your Plant was not of late removed, but that it have already fully taken Roote.

7.

When you are minded to graft many grafts into one Cleft, you must see that they be cut in the end all alike.

See that the grafts be of one length, or not much differing, and it is enough, that they have three or four eylets without the Wrench when the Plant is once sawed, and lopped of all his
bran-

branches if it have many : then you must leave but two at the most before you come to the cleaving of it ; then put to your little Saw, or your Knife, or other edged tool that is very sharp, cleave it quite thorough the middlest, in gentle and soft sort : First, tying the stock very sure, that so it may not cleave further than is need : and then put to your wedges into the cleft untill such time as you have set in your grafts, and in cleaving of it, hold the Knife with the one hand, and the tree with the other, to help to keep it from cleaving too far. Afterwards put in your wedge of Box or Brazil, or bone, at the small end ; so that you may the better take it out again when you have set in your grafts.

If the stock be cloven, or the bark loosed too much from the wood : then cleave it down lower, and set your grafts in, and look that their Incision be fit, and very justly answerable to the cleft, and that the two saps, first, of the plant and graft, be right and even set one against the other, and so handsomely fitted, as that there may not bee the least appearance of any cut or cleft. For if they do not thus jump one with another, they will never take one with another, because they cannot work their seeming matter, and as it were cartilaginous glue in convenient sort or manner to the gluing of their joynts together. You must likewise beware not to make your cleft overthwart the pitch, but somewhat aside.

The bark of your plant being thicker than that of your graft, you must set the graft so much the more outwardly in the cleft, that so the two saps may in any case be joyned, and set right the one with the other, but the rind of the plant must be somewhat more out than that of the grafts or cloven side.

To the end that you may not faile of this work of imping, you must principally take heed, not to over-cleave the stocks of your trees. But before you widen the cleft with your wedges, bind and go about the stock with two or three turns, and that with an Ozier, close drawn together, underneath the same place, where you would have your cleft to end, that so your stock cleave not too far, which is a very usuall cause of the miscarrying of grafts, in as much as hereby the cleft standeth so wide and open, as that it cannot be shut, and so not grow together again : but in the mean time spendeth it self, and breatheth out all his life in that

that place which is the cause that the stock & the Graft are both spilt. And this falleth outmost often in plum trees, and branches of trees. You must be carefull to joyne the rinds of your grafts, and plants, that nothing may continue open, to the end that the wind, moisture of the Clay or Raine running upon the grafted place, do not get in: when the plant cleaveth very straight, there is not any danger nor hardshipp in sloping downe the graft. If you leave it somewhat uneven or rough in some places, or that the saps both of the one and the other may the better grow, and be glewed together, when your grafts are once well joyned to your plants, draw out your wedges very softly, lest you displace them again: you may leave therewith in the cleft some small end of a wedge of green wood, cutting it very close with the heid of the Stock: Some cast glue into the cleft, some sugar, and some gummed Wax.

10.

11. If the Stock of the Plant, whereupon you intend to graft, be not so thick as your graft, you shall graft it after the fashion of a Goats foot, make a cleft in the stock of the plant, not direct, but byas, and that smooth and even, not rough: then apply and make fast thereto the graft with all his bark on, and answering to the bark of the Plant. This being done, cover the place with the fat earth and moss of the Woods tyed together with a strong band: stick a pole of Wood by it to keep it steadfast.

CHAP. IV.

Grafting like a Scutcheon.

IN grafting after the manner of a Scutcheon, you shall not vary not differ much from that of the Flute or pipe, save onely that the Scutcheon-like graft having one eylet, as the other hath, yet the wood of the tree whereupon the Scutcheon-like graft is grafted hath not any knob, or bud, as the wood whereupon the graft is grafted after the manner of a pipe.

12.

In Summer when the trees are well replenished with sap, and that their new Siens begin to grow somewhat hard, you shall take a shoot at the end of the chief branches of some noble and reclaimed trees: whereof you would faine have some fruit, and not many of his old store or wood, and from thence raise a good eylet, the tail and all thereof to make your grafts. But when you choose, take the thickest, and grossest, divide the tail in
the

the midst before you do any thing else, casting away the leaf (if it be not a pear plum-tree: for that would have two or three leaves) without removing any more of the said taile: afterward with the point of a sharp knife, cut off the Bark of the said shoot, the pattern of a shield, of the length of a nail.

In which there is onely one eylet higher than the midst, together with the residue of the taile which you left behind: and for the lifting up of the said graft in Scutcheon, after that you have cut the bark of the shoot round about, without cutting of the wood within, you must take it gently with your thumb, and in putting it away you must presse upon the wood from which you pull it, that so you may bring the bud and all away together with the Scutcheon: for if you leave it behind with the wood, then were the Scutcheon nothing worth. You shall finde out if the Scutcheon be nothing worth, if locking within when it is pulled away from the wood of the same suite, you find it to have a hole within, but more manifestly, if the bud do stye behind in the wood, which ought to have been in the Scutcheon.

Thus your Scutcheon being well raised and taken off, hold it a little by the taile betwixt your lips, without wetting of it, even untill you have cut the barke of the tree where you would graft it, and look that it be cut without any wounding of the wood within, after the manner of a crutch, but somewhat longer than the Scutcheon that you have to set in it, and in no place cutting the wood within: after you have made incision, you must open it, and make it gape wide on both sides, but in all manner of gentle handling & that with a little Sizors of bone, and separating the wood and the bark a little within, even to much as your Scutcheon is in length and breadth: you must take heed that in doing hereof, you do not hurt the bark.

This done, take your Scutcheon by the end, and your taile which you have left remaining, and put into your incision made in your tree, lifting up softly your two sides of the incision with your said Sizors of bone, and cause the said Scutcheon to joyne, and lye as close as may be, with the wood of the tree, being cut as aforesaid, in waying a little upon the end of your rinde to cut: and let the upper part of your Scutcheon lye close unto the upper end of your incision, or bark of your said tree: afterwards bind

13.

14.

15.

bind your Scutcheon about with a band of Hemp; as thick as a pen of a quill more or lesse, according as your tree is small or great, taking the same Hemp in the middle, to the end that either part of it may performe a like service; and wreathing and binding of the said Scutcheon into the incision of a tree and it must not be tyed too streight, for that will keepe it from taking, the joyning of the one sap to the other being hindered thereby, and neyther the Scutcheon nor yet the Hemp must be moist or wet: and the more justly to bind them together, begin at the back side of the tree, right over against the middlest the incision, and from thence come forward to joyn them before, above the eylet and taile of the Scutcheon, crossing your band of hemp, so oft as the two ends meet; and from thence returning back againe, come about and tye it likewise underneath the eylets, and thus cast about your band still backward and forward untill the whole cleft of the incision be covered above and below with the said Hemp, the eylet onely excepted, and his taile, which must not be covered at all; his taile will fall away one part after another, and that shortly after the ingrafting, if so be the Scutcheon will take. Leave your trees and Scutcheons thus bound for the space of one month; and the thicker, a great deale longer time. Afterward look them over, and if you perceive them to grow together untie them, or at leastwise cut the Hemp behind them, and leave them uncovered. Cut also your branch two or three fingers above that, so the imp may prosper the better: and thus let them remaine till after winter, about the month of *March* and *April*.

17.

18.

If you perceive that the buds of your Scutcheon doe swell and come forward, then cut off the tree three fingers or thereabouts, above the Scutcheon: for if it be cut off too neer the Scutcheon, at such time as it putteth forth his first blossome, it would be a meanes greatly to hinder the flowing of it, and cause also that it should not thrive and prosper well: after that one year is past, and that the shoot beginneth to be strong, beginning to put forth the second bud and blossome, you must go forward to cut off in byas-wise the three fingers in the top of the tree which you left there, when you cut it in the year going before as hath been said.

When

When your shoot shall have put forth a great deal of length, you may stick down there, even hard joyned thereunto, little stakes, tying them together very gently and easily; and these shall stay your shoots and prop them up, letting the wind from doing any harm unto them. Thus you may graft white Roses in red, and red in white. Thus you may graft two or three Scutcheons, provided that they be all of one side; for they will not be set equally together in height, because then they would be all stravelings; neither would they be directly one over another; for the lower would stay the rising up of the sap of the Tree, and so those above should consume in penury, and undergo the aforesaid inconvenience. You must note, that the Scutcheon which is gathered from the Sien of a tree whose fruit is sowre, must be cut in square form, and not in the plain fashion of a Scutcheon. It is ordinary to graffe the sweet Quince Tree, bastard Peach-tree, Apricock-tree, Jujube tree, sowre Cherry-tree, sweet Cherry-tree, and Chestnut-tree, after this fashion, howbeit they may be grafted in the cleft more easily, and more profitably; although divers be of a contrary opinion, as thus: Take the grafts of sweet Quince-tree, and Bastard Peach-tree, of the fairest wood, and best sed that you can find, growing upon the wood of two years old, because the wood is not so firme and solid as the others: and you shall graft them upon small Plum-tree stocks, being of the thicknesse of ones thumb; these you shall cut after the manner of a Goats foot: you shall not goe about to make the cleft of any more sides then one, being about a foot high from the ground; you must open it with your small wedge: and being thus grafted, it will seem to you that it is open but of one side: afterward you shall wrap it up with a little Masse, putting thereto some gummed Wax. or Clay, and bind it up with Oziers to keep it surer, because the stock is not strong enough it self to hold it, and you shall furnish it every manner of way, as others are dealt withall; this is most profitable.

19

20

21

The time of Grafting.

All Months are good to graft in, (the Month of *October* and *November* onely excepted) But commonly, graft at that time of

the winter, when the sap beginneth to arise.

In a cold Country graft later, in a warme Country earlier.

The best time generally is from the first of *February*, untill the first of *May*.

The grafts must alwayes be gathered, in the old of the Moon.

For grafts choose shoots of a year old, or at the futhermost two years old.

If you must carry grafts far, prick them into a Turnep newly gathered, or lay earth about the ends.

If you set stones of Plummes, Almonds, Nuts, or Peaches, First let them lye a little in the Sun, and then steep them in Milk or Water three or four dayes, before you put them into the earth.

Dry the Kernels of Pippins, and sow them in the end of *November*.

The stone of a Plum-tree must be Set a foot deep, in *November* or *February*.

The Date stone must be Set the great end downwards, two cubits deep in the earth, in a place enriched with dung.

The Peach-stone would be Set presently after the Fruit is eaten, some quantity of the flesh of the Peach remaining about the stone.

If you would have it to be excellent, graft it afterward upon an Almond tree.

The little Sions of Cherry-trees, grown thick with haire, roots, and those also which do grow up from the Roots of the great Cherry-trees, being removed, do grow better and sooner then they which come of stones: but they must be removed and planted, while they are but two or three years old, the branches must be lopped.

A very profitable Invention, for the speedy Planting of an Orchard of Fruit- Trees.

ABout the end (or rather the middle) of *June*, the sap being then in the boughes or **Tops** of the **Trees**, let some one of discretion goe up into the boughes of the Tree intended, and with a keen-knife cut the bark of some smooth bough, so chosen, round about the same, quite through the same bark, to the very bare wood, in two places, (toward the butt of the bough) a full hand breadth the one from the other, and take off the bark cleanly from the said bough, and cast it away, and wipe the sap off that bared place; Then take some of the stiffest clay you can have, and wrap it hard, round about the said bared place, (that it may stop the sap when it descendeth;) bind on this clay with fallow lings, or the like, very hard; Let this clay be two inches thick at least. Then prepare a certain quantity of good ranke mould, tempered with short muck and misken water, and make mortar thereof, and wrap a good quantity of it as big as a foot bill, upon the firm bark remaining close about the said clay, that it may touch the same; put moss upon it, & as before, bind it well, and so let it continue growing upon the same Tree till *February*. Then with a fine saw carefully take off the said bough close below the clay, not perishing the upper mortar; and set that bough with the clay and mortar on it, in some good ground, and there let it remain to grow: for the sap it cannot pass downward for the clay butt it yech in the upper mortar, and breeds roots and possibly (God willing) may bear fruit the next Summer following. Thus you may order many such boughes as aforesaid, and quickly plant an Orchard of bearing Trees. If the bough be as big as the small of ones leg, it is so much the better: *probatum est.*



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THE
HUSBAND MANS
Fruitfull Orchard.

For the true ordering of all sorts of
Fruits in their due seasons : and how double
increase comes by care in gathering year after
year : as also the best way of carring by land
or by water, with their preservation for
longest continuance.



Of all stone Fruit, Cherries are the first to be
gathered : of which though we reckon foure
sorts ; *English, Flemish, Gascoigne, and Black,*
yet are they reduced to two, the early, and the
ordinary ; the early are those whose grafts
came first from *France* and *Flanders*, and are
now ripe with us in *May* : the ordinary is our
own naturall Cherry, and is not ripe before *June* : they must
be carefully kept from Birds, either with nets, noise, or other
industry.

They

Gathering of Cherries. They are not all ripe at once, nor may be gathered at once, therefore with a light Ladder, made to stand of it selfe without hurting the boughes, mount to the Tree, and with a gathering hook gather those which be full Ripe, and put them into your Cherry-pot, or Kybzey hanging by your side, or upon any bough you please, and be sure to break no stalk, but that the cherry hangs by, and pull them gently, lay them down tenderly, and handle them as little as you can.

To carry Cherries. For the conveyance or portage of Cherries, they are best to be carried in broad Baskets like lives, with smooth yielding bottoms, only two broad laths going along the bottome: and if you do transport them by ship, or boat, let not the lives be filled to the top, lest setting one upon another, you bruise and hurt the Cherries: if you carry by horse-back, then panniers well lined with Earne, and packed full and close is the best and safest way.

Other stone-fruit. Now for the gathering of all other stone fruit, as Nectarines, Apricocks, Peaches, Pearre-Plummes, Damsons, Bullas, and such like, although in their severall kinds, they seem not to be ripe at once on one Tree: yet when any is ready to drop from the Tree though the other seem hard, yet they may also be gathered, for they have received the full substance the tree can give them; and therefore the day being faire, and the dew drawn away, set up your Ladder, and as you gathered your Cherries so gather them: onely in the bottoms of your large lives, where you port them, you shall lay Nettles, and likewise in the top, for that will ripen those that are most unready.

Gathering of Peares. In gathering of Pears are three things observed: to gather for expence, for transportation, or to sell to the Apothecary. If for expence, and your own use, then gather them as soon as they change, and are as it were half ripe, and no more but those which are changed, letting the rest hang till they change also: for thus they will ripen kindly, and not rot so soon, as if they were full ripe at the gathering. But if your Peares be to be transported far either by Land or Water, then pull one from the Tree, and cut it in the middle, and if you find it hollow about the coare, and the kernell a large space to lye in, although no Pear

be ready to drop from the Tree, yet then they may be gathered, and then laying them on a heap one upon another, as of necessity they must be for transportation, they will ripen of themselves, and eat kindly: but gathered before, they will wither, shrink, and eate rough, losing not onely their tast, but beauty.

Now for the manner of gathering, albeit some clime into the trees by the boughes, and some by Ladder, yet both is amisse; the best way is with the Ladder before spoken of, which standeth of it self, with a basket and a line, which being full, you must gently let down, and keeping the string still in your hand, being emptied, draw it up again, and so finish your labour, without troubling you self, or hurting the Tree.

Now touching the gathering of Apples, it is to be done according to the ripening of the fruit; your Summer Apples first, and the Winter after.

For Summer fruit, when it is ripe, some will drop from the Tree, and Birds will be pecking at them: But if you cut out one of the greenest, and find it as was shew'd you before of the Peare: then you may gather them, and in the house they will come to their ripeness and perfection. For your Winter fruit, you shall know the ripeness by the observation before shewed; but it must be gathered in a fair, sunny, and dry day, in the waine of the Moone, and no Wind in the East, also after the dew is gone away; for the least wet or moysture will make them subject to rot and mildew; also you must have an apron to gather in, and to empty into the great basket, and a hook to draw the boughes unto you, which you cannot reach with your hands at ease: the apron is to be an Ell every way, loopt up to your girdle, so as it may serve for either hand without any trouble: and when it is full, unloose one of your loopes, and empty it gently into the great basket, for in throwing them down roughly, their owne stalkes may prick them, and those which are prickt, will ever rot. Again, you must gather your fruit clean without leaves or brunts, because the one hurts the Tree, for every brunt would be a stalk for fruit to grow upon: the other, hurts the fruit by bruising, and pricking it, as it is laid together, and there is nothing sooner rotteth fruit,

fruit, then the green and withered leaves lying among them; neither must you gather them without any stalke at all: for such fruit will begin to rot where the stalk stood

To use the fallings.

For such fruit as falleth from the trees, and are not gathered, they must not be laid with the gathered fruit: and of fallings there are two sorts; one that falls through ripeness, and they are best, and may be kept to bake or roast: the other windfall, falling before they are ripe; and they must be spent as they are gathered, or else they will wither and come to nothing; and therefore it is not good by any means to beat down fruit with Poles, or to carry them in carts loose and jogging, or in sacks where they may be bruised.

Carriage of fruit.

When your fruit is gathered, you shall lay them in deep Baskets of Wicker, which shall contain four or six bushels, and so between two men, carry them to your Apple Loft; and in shooting, or laying them downe, be very carefull that it be done with all gentleness, and leasure, laying every sort of fruit severally by it self: but if there be want of room, having so many sorts that you cannot lay them severally, then some such fruit as is nearest in taste and colour, and of Winter fruit, such as will taste alike, may, if need require, be laid together, and in time you may separate them, as shall be shewed hereafter. But if your fruit be gathered far from your Apple-Loft, then must the bottomes of your Baskets be lined with green Ferne, and draw the stubborn ends of the same through the Basket, that none but the soft leaf may touch the fruit, and likewise cover the tops of the Baskets with Ferne also, and draw a small cord over it, that the Ferne may not fall away, nor the fruit scatter out, or jogge up and downe: and thus you may carry fruit by Land or by Water, by Boat, or Cart, as farre as you please: and the Ferne doth not onely keep them from bruising, but also ripens them, especially Peares. When your fruit is brought to your Apple Loft, or store-house, if you find them not ripened enough, then lay them in thicker heaps upon Ferne, and cover them with Ferne also: and when they are nigh ripe, then uncover them, and make the heaps thinner, so as the ayr may passe through them: and if you will not hasten the ripening of them, then lay them on the boards with-

out

out any Ferne at all. Now for Winter, or long lasting Peares, they may be packt either in Fern or Straw, and carried whither you please; and being come to the journies end must be laid upon sweet straw: but beware the room be not too warme, nor windy, and too coole, for both are hurtfull: but in a temperate place, where they may have air, but not too much.

Wardens are to be gathered, carried, packt, and laid as Winter Pears are.

Of Wardens.

Medlers are to be gathered about *Michaëmas*, after a frost hath toucht them; at which time they are in their full growth, and will then be dropping from the tree, but never ripe upon the tree. When they are gathered, they must be laid in a basket, sieve, barrell, or any such caske, and wrapt about with woollen cloaths, under, over, and on all sides, and also some weight laid upon them, with a board between: for except they be brought into a heat, they will never ripen kindly, or taste well.

Of Medlers.

Now when they have laine till you think some of them be ripe, the ripest, still as they ripen, must be taken from the rest; therefore powre them out into another sieve or basket leasurely, that so you may well find them that be the ripest, letting the hard ones fall into the other basket, and those which be ripe laid aside: the other that be half ripe sever also into a third sieve or basket: for if the ripe and half ripe be kept together, the one will be mouldy, before the other be ripe: And thus do till all be thoroughly ripe.

Quinces should not be laid with other fruit; for the sent is offensive both to other fruit, and to those that keep the fruit or come amongst them; therefore lay them by themselves upon sweet straw, where they may have aire enough: they must be packt like Medlers, and gathered with Medlers.

Apples must be packt in Wheat or Rye straw, and in maunds or To pack baskets loined with the same, and being gently handled, will Apples ripen with such packing and lying together. If severall sorts of apples be packt in one maund or basket, then between every sort lay sweet straw of a pretty thicknesse.

Apples must not be powred out, but with care and lea- Emptying and sure: first, the straw pickt clean from them, and then gently laying apples, take

take out every severall sort, and place them by themselves : but if for want of room you mixe the sorts together, then lay those together that are of equal lasting : but if they have all one taste, then they need no separation. Apples that are not of like colours should not be laid together, and if any such be mingled, let it be amended, and those which are first ripe, let them be first spent, and to that end, lay those apples together, that are of one time of ripening, and thus you must use Pippins also, yet will they endure bruises better than any other fruit, and whilst they are green will heal one another.

Difference in
fruit.

Pippins though they grow of one tree, and in one ground, yet some will last better than other-some, and some will be bigger then others of the same kind, according as they have more or lesse of the Sun, or more or lesse of the droppings of the trees or upper branches : therefore let every one make most of that fruit which is fairest and longest lasting. Again, the largenesse and goodnesse of fruit consists in the age of the tree : for as the tree increaseth, so the fruit increaseth in bignesse, beauty, taste, and firmnesse: and otherwise as it decreaseth.

Transporting
fruit by water.

If you be to transport your fruit far by water, then provide some dry hogheads or barrells, and pack in your apples, one by one, with your hand, that no empty place may be left, to occasion fogging ; and you must line your vessel at both ends with fine sweet straw ; but not the sides, to avoid heat ; and you must then bore a dozen holes at either end, to receive aire so much the better, and by no means let them take wet. Some use, that transport beyond seas, to shut the fruit under hatches upon straw : but it is not so good, if casks may be gotten.

When not to
transport fruit

It is not good to transport fruit in *March*, when the wind blows bitterly, nor in frosty weather, neither in the extreame heat of Summer.

To convey
small store of
fruit.

If the quantity be small you would carry, then you may carry them in dossers or paniers, provided they may be ever filled close ; and that Cherries and Pears be lined with green Ferns, and Apples with sweet straw ; and that, but at the bottomes and tops, not on the sides.

Rooms for
fruit.

Winter fruit must lye neither too hot, nor too cold, too close, nor too open : for all are offensive. A low Room or Cellar that

that is sweet, and either boarded or paved, and not too close, is good, from *Christmas* till *March*; and Roomes that are seiled over-head, and from the ground, are good from *March* till *May*, then the Cellar again, from *May* till *Michæmas*. The apple-bst would be seiled or boarded, which if it want, take the longest Rye-straw, and raise it against the walls, to make a fence as high as the fruit lyeth; and let it be no thicker than to keep the fruit from the wall, which being moist, may do hurt, or if not moist, then the dust is offensive.

There are some fruit which will last but untill *Autumn*: they must be laid by themselves: then those which will last till *Christmas*, by themselves; then those which will last till it be *Christmas*, by themselves; those that will last till *Shrovetide*, by themselves; and Pippins, Apple-Johns, Pearre-maines, and Winter Russetings, which will last all the year, by themselves.

Now if you spye any rotten fruit in your heaps, pick them out, and with a Tray for the purpose, see you turne the heapes over, and leave not a tainted Apple in them, dividing the hardest by themselves, and the broken skinned by themselves to be first spent, and the rotten ones to be cast away; and ever as you turn them, and pick them, under-lay them with fresh straw: thus shall you keepe them for your use, which otherwise would rot suddenly.

Pippins, John Apples, Pear maines, and such like long lasting fruit, need not to be turned till the week before *Christmas*, unless they be mixt with the other of riper kind, or that the fallings be also with them, or much of the first straw left amongst them: the next time of turning is at *Shrovetide*; and after that once a month till *Whitsontide*; and after that, once a fortnight; and ever in the turning lay your heaps lower and lower, and your straw very thinne: provided you doe none of this labour in any great frost, except it be in a close Celler. At every thaw, all fruit is moist, and then they must not be touched: neither in rainy weather, for then they will be dank also; and therefore at such seasons it is good to set open your windows and doores, that the air may have free passage to dry them, and at nine of the clock in the forenoon in Winter; and at sixe in the forenoone

and at eigne at night in Summer ; only in *March*, open not your windows at all.

All lasting fruit, after the midst of *May*, begin to wither, because then they wax dry, and the moisture gone, which made them look plump, they must needs wither, and be small ; and nature decaying, they must needs rot. And thus much touching the ordering of fruits.

FINIS.
